

GETTING READY FOR A NUCLEAR-READY IRAN

Edited by

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This book has been 2 years in the making and has benefited from the financial backing of both private foundations and the U.S. Department of Defense. It would not have been possible, however, without the expertise and guidance of several individuals. The first and most important among these is Patrick Clawson who, as co-editor, was instrumental in identifying both the topics and authors of the commissioned research that makes up this volume's chapters.

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Comments pertaining to this report are invited and should be forwarded to: Director, Strategic Studies Institute, U.S. Army War College, 122 Forbes Ave, Carlisle, PA 17013-5244.

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INTRODUCTION

Little more than a year ago, the Nonproliferation Policy Education Center (NPEC) completed its initial analysis of Iran's nuclear program, *Checking Iran's Nuclear Ambitions*. Since then, Tehran's nuclear activities and public diplomacy have only affirmed what this analysis first suggested: Iran is not about to give up its effort to make nuclear fuel and, thereby, come within days of acquiring a nuclear bomb. Iran's continued pursuit of uranium enrichment and plutonium recycling puts a premium on asking what a more confident nuclear-ready Iran might confront us with and what we might do now to hedge against these threats.

These questions are the focus of this volume. The book is divided into four parts. The first presents the findings of the NPEC's working group on Iran. It reflects interviews with government officials and outside specialists and the work of some 20 regional security experts whom NPEC convened in Washington to discuss the commissioned research that is contained in this book. Some of this report's findings to keep Iran and others from overtly deploying nuclear weapons or leaving the Nuclear Nonproliferation Treaty (NPT) are beginning to gain official support. The U.S. Government, the International Atomic Energy Agency (IAEA), and an increasing number of allies now support the idea that states that violate the NPT be held accountable for their transgressions, even if they should withdraw from the treaty. There also has been increased internal governmental discussion about the need to clarify what should be permitted under the rubric of "peaceful" nuclear energy as delineated under the NPT. The remaining report recommendations, which were presented in testimony before Congress in March of 2005, remain to be acted upon. Whether they will or will not, of course, depends greatly on how public officials view the Iranian nuclear threat.

This, then, brings us to the book's second part, "Tehran's Nuclear Endeavors: What's the Worry?" Richard Russell starts off this section by detailing how Iran's neighbors are likely to hedge their own security bets as Tehran goes literally more and more nuclear and ballistic. Critical to what these nations might do is just

how nuclear-capable they are themselves. This is detailed by Wyn Bowen and Joanna Kidd in their chapter, "The Nuclear Capabilities and Ambitions of Iran's Neighbors." In it, we learn just how close Egypt, Saudi Arabia, Turkey, Syria, and Iraq are to acquiring nuclear weapons of their own. The special case of Turkey, a full-fledged North Atlantic Treaty Organization (NATO) ally, is addressed in greater detail in Ian Lesser's chapter, "Turkey, Iran and Nuclear Risks." The good news here is that if the European Union and the United States provide proper support on both security and economic fronts, Turkey is unlikely to go its own way. The bigger picture of what might transpire after Iran overtly goes nuclear, though, is sure to be grim. Kenneth Timmerman spells out the increased prospects for war and much more violent terrorism in his chapter, "The Day After Iran Gets the Bomb."

What can be done? The two popular policy options—military strikes against Iran's known nuclear facilities and imposing economic sanctions against Tehran—are analyzed in the book's third part, "Is There A Simple Military or Sanctions Fix?" Shlomo Brom, a retired Israeli general, explains why, although it would be extremely popular in Israel to attempt another Osirac-like raid against Iran's known facilities, the operational prospects for success are not very high. What of having the United States assume this mission? Thomas Donnelly, a staunch supporter of the invasion of Iraq, explains how launching a limited raid against Iran's nuclear facilities could jeopardize the larger American campaign to liberalize and moderate the Middle East. Imposing economic sanctions against Iran is a possible alternative, but how realistic or effective would these likely be? These questions are addressed in the analysis by George Perkovich and Silvia Manzanero, "Iran Gets the Bomb—Then What?" Their conclusion is that it will be difficult to secure the support necessary to make sanctions against Iran work.

This, then, brings us to the book's final part, "Further Courses of Action." In it, two traditional and two unorthodox policy options are examined. The first of these, which is to reduce the potential vulnerability of Persian Gulf energy shipments to Iranian interference, is examined by Dagobert Brito and Amy Myers Jaffe in their chapter, "Reducing Vulnerability of the Strait of Hormuz." By refurbishing existing pipe lines and building others, the need to send

oil and gas through the strait could be dramatically reduced at a relatively affordable level of spending. This, of course, would require the cooperation and support of the major oil producers in the region. Their help also would be needed to fortify existing levels of defense cooperation with the United States, without which the prospects of deterring and containing a nuclear-ready Iran would surely be low. What exactly can be done in cooperation with the Persian Gulf states is detailed by Michael Eisenstadt in his chapter, "Deter and Contain: Dealing with a Nuclear Iran." What role might diplomacy play in keeping Iran from exploiting its ability to disrupt energy exports from the region? Douglas Streusand examines this question in his analysis, "Managing the Iranian Threat to Sea Commerce Diplomatically." Using the sea control agreements reached with Turkey and the Soviet Union as models, Streusand suggests several negotiating and public diplomacy initiatives that would keep Iran from using its military capabilities to interfere with continued free passage of goods in and out of the Persian Gulf. The success of this effort, as with so many others, of course, would depend on the solidarity of the United States and its key allies, not only in but outside of the Gulf region. How likely such support may be is the focus of the concluding chapter by Thérèse Delpech entitled "What Transatlantic Strategy on Iran?"

CHAPTER 1

GETTING READY FOR A NUCLEAR-READY IRAN: REPORT OF THE NPEC WORKING GROUP

Henry Sokolski

OVERVIEW

When it comes to Iran's nuclear program, most U.S. and allied officials are in one or another state of denial. All insist it is critical to prevent Tehran from acquiring nuclear weapons. Yet, few understand just how late it is to attempt this. Iran is now no more than 12 to 48 months from acquiring a nuclear bomb, lacks for nothing technologically or materially to produce it, and seems dead set on securing an option to do so. As for the most popular policy options—to bomb or bribe Iran—too few analysts and officials are willing to admit publicly how self-defeating these courses of action might be.

This report, based on commissioned research and 2 years' worth of meetings with the nation's leading experts on Iran, the Middle East, and nuclear proliferation, is intended to highlight sounder policy options. It makes seven recommendations designed to reduce the potential harm Iran might otherwise do or encourage, once it gained nuclear weapons or the ability to have them in a matter of days. The report reflects analysis done at a series of competitive strategies workshops that focused on the next 2 decades of likely competition between America and Iran and what comparative strengths the United States and its allies might use to leverage Iranian behavior¹.

These workshops identified three threats that are likely to increase following Iran's acquisition of a nuclear weapons option.

1. Even More Nuclear Proliferation. Iran's continued insistence that it acquired its nuclear capabilities legally under the Nuclear Nonproliferation Treaty (NPT) would, if unchallenged, encourage its neighbors (including Iraq, Saudi Arabia, Egypt, Syria, Turkey, and Algeria) to develop nuclear options of their own by emulating Iran's example, by overtly declaring possession (in Israel's case)

or by importing nuclear weapons (in Saudi Arabia's case). Such announcements and efforts, in turn, would likely undermine nuclear nonproliferation restraints internationally and strain American relations with most of its key friends in the Middle East.

2. Dramatically Higher Oil Prices. A nuclear-ready Iran could be emboldened to manipulate oil prices upward. It might attempt this either by threatening the freedom of the seas (by mining oil transit points as it did in the 1980s, or by threatening to close the Straits of Hormuz), or by using terrorist proxies to threaten the destruction of Saudi and other Gulf state oil facilities and pipelines.

3. Increased Terrorism Designed to Diminish U.S. Influence. With a nuclear weapons option acting as a deterrent to the United States and allied action against it, Iran would likely lend greater support to terrorists operating against Israel, Iraq, Libya, Saudi Arabia, Europe, and the United States. The aim of such support would be to reduce American support for U.S. involvement in the Middle East, for Israel, and for actions against Iran generally, and to elevate Iran as an equal to the United States and its allies on all matters relating to the Persian Gulf and related regions. An additional aim of the terrorism that Iran would support would be to keep other nations from supporting U.S. policies and the continued U.S. military presence in the Middle East.

All of these threats are serious. If realized, they would undermine U.S. and allied efforts to foster moderate rule in much of the Middle East and set into play a series of international competitions that could ultimately result in major wars. Most U.S. and allied policymakers understand this and are now preoccupied with trying to prevent Iran from ever acquiring a nuclear weapons option. As Iran gets closer to securing this option, though, two questionable courses of action—bombing or bribing Iran—have become increasingly popular. Neither, however, is likely to succeed and could easily make matters worse.

Certainly, targeting Iran's nuclear facilities risks leaving other covert facilities and Iran's nuclear cadre of technicians untouched. More important, any overt military attack would give Tehran a *casus belli* either to withdraw from the NPT, or to rally Islamic Jihadists

to wage war against the United States and its allies more directly. Whatever might be gained in technically delaying Iran's completion of having a bomb option would have to be weighed against what might be lost in Washington's long-term efforts to encourage more moderate Islamic rule in Iran and the Middle East; to synchronize allied policies against nuclear proliferation; and to deflate Iran's rhetorical demonstrations against U.S. and allied hostility. Meanwhile, merely bluffing an attack against Iran—sometimes urged as a way around these difficulties—would only aggravate matters: The bluff would eventually be exposed, and so only embolden Iran and weaken U.S. and allied credibility further.

As for negotiating directly with Tehran to limit its declared nuclear program—an approach preferred by most of America's European allies—this, too, seems self-defeating. First, any deal the Iranian regime would agree to would only validate that the NPT legally allows its members to acquire all the capabilities Iran mastered. Second, it would foster the view internationally that the only risk in violating required NPT inspections would be to be caught and then bribed to limit only those activities the inspectors managed to discover.

Considering these shortcomings, the working group decided that, rather than trying merely to eliminate Iran's ability to develop a nuclear option (something that may no longer be possible), it also would be useful to devise ways to curb the harmful things Iran might do or encourage, once it secured such an option. This approach produced seven recommendations that the workshop participants believed were not receiving sufficient attention currently. These steps, they argued, would increase the credibility of current efforts to prevent Iran from going nuclear and needed to be pursued, in any case, if prevention failed. These recommendations were:

1. Discrediting the legitimacy of Iran's nuclear program as a model for other proliferators through a series of follow-on meetings to the 2005 NPT Review Conference to clarify what activities qualify as being "peaceful" under the NPT.

2. Increasing the costs for Iran and its neighbors to leave or infringe the NPT by establishing country-neutral rules against violators withdrawing from the treaty and against NPT violators more generally.

3. Securing Russian cooperation in these efforts by offering Moscow a lucrative U.S. nuclear cooperation agreement.

4. Reducing Persian Gulf oil and gas production and distribution system vulnerabilities to possible terrorist disruptions by building additional back-up capabilities in Saudi Arabia.

5. Limiting Iran's freedom to threaten oil and gas shipping by proposing a Montreux-like convention to demilitarize the Straits of Hormuz and an agreement to limit possible incidents at sea.

6. Isolating Iran as a regional producer of fissile materials by encouraging Israel to take the first steps to freeze and dismantle such capabilities.

7. Backing these diplomatic-economic initiatives with increased U.S.-allied anti-terrorist, defense, naval border security, and nuclear nonproliferation cooperation.

Would taking these steps eliminate the Iranian nuclear threat? No. Given Iran's extensive nuclear know-how and capabilities, it is unlikely that the United States or its allies can deny Iran the technical ability to covertly make nuclear weapons. Yet, assuming adoption of the steps described, it would be far riskier diplomatically, economically, and militarily for Iran to acquire nuclear weapons than is currently the case. More important, taking these steps would leverage the comparative strengths of the United States and its friends in a manner that would undermine Iran's efforts to divide the United States from its allies and to deter them from acting against Iranian misbehavior. It would not only discourage Iran's neighbors from following Iran's nuclear example, but force a needed reconsideration of what nuclear activities ought to be protected under the NPT (including those Iran has used to justify completing its own nuclear breakout capabilities). Finally, it would map a non-nuclear future for the Middle East that might be eventually realized (assuming a change of heart by Iran and others) through verifiable deeds rather than dependent on precise intelligence (which is all too elusive).

BACKGROUND

When U.S. and allied officials speak of Iran's nuclear weapons program, imperatives are used freely: Iran, we are told, *must* not

be allowed to acquire nuclear weapons; the United States and its allies *cannot tolerate* Iran going nuclear; a nuclear-armed Tehran is *unthinkable*.

Yet, the truth is that Iran soon can and will get a bomb option. All Iranian engineers need is a bit more time—1 to 4 years at most. No other major gaps remain: Iran has the requisite equipment to make the weapons fuel, the know-how to assemble the bombs, and the missile and naval systems necessary to deliver them beyond its borders. As noted in the working group's earlier report (*Checking Iran's Nuclear Ambitions*), no scheme, including "just in time" delivery of fresh fuel and removal of spent fuel from Bushier, will provide much protection against Iran diverting its peaceful nuclear program to compliment its covert efforts to make bombs.²

As for eliminating Iran's nuclear capabilities militarily, the United States and Israel lack sufficient targeting intelligence to do this. In fact, Iran long has had considerable success in concealing its nuclear activities from U.S. intelligence analysts and International Atomic Energy Agency (IAEA) inspectors. (The latter recently warned against assuming the IAEA could find all of Iran's illicit uranium enrichment activities). As it is, Iran already could have hidden all it needs to reconstitute a bomb program, assuming its known declared nuclear plants were hit.

Compounding these difficulties is what Iran might do in response to such an attack. After being struck, Tehran could declare that it must acquire nuclear weapons as a matter of self-defense, withdraw from the NPT, and accelerate its nuclear endeavors. This would increase pressure on Israel (which has long insisted that it will not be "second" in possessing nuclear arms in the Middle East) to confirm its possession of nuclear weapons publicly, and thus set off a chain of possible nuclear policy reactions in Cairo, Damascus, Riyadh, Algiers, and Ankara.

On the other hand, Iran could continue to pretend to comply with the NPT, which could produce equally disastrous results. After being attacked, Iran might appeal to the IAEA, the Arab League, the Non-Aligned Movement, the European Union (EU), and the United Nations (UN) to make Iran's nuclear program whole again, and once again, use this "peaceful" program to energize and serve as a cover for its covert nuclear weapons activities. This would again

put the entire neighborhood on edge, debase the NPT, and set a clear example for all of Iran's neighbors to follow on how to get a weapons option. In addition, as more of Iran's neighbors secured their own nuclear options, Washington's influence over its friends in the region (e.g., Egypt and Saudi Arabia) would likely decline, as well as Washington's ability to protect North Atlantic Treaty Organization (NATO) allies (e.g. Turkey) and non-NATO allies (e.g., Israel) in the region.

In addition, Iran might respond to an overt military attack by striking back covertly against the United States, Saudi Arabia, Iraq, or Israel through the support of non-Iranian terrorist organizations.

The ramifications of any of these responses are difficult to minimize. Finally, Iran could take any and all of these actions *without* actually ever testing, sharing, or deploying, nuclear weapons. Certainly, as long as most nations buy Tehran's argument that the NPT's guarantee to "peaceful" nuclear energy gives it and all other members the right to develop everything needed to come within a screwdriver's turn of a nuclear arsenal, Iran will be best served by getting to this point and going no further. Indeed, by showing such restraint, Iran's mullahs could avoid domestic and international controversies that might otherwise undermine their political standing, along with possible additional economic sanctions, and the added costs of fielding a survivable nuclear force. Meanwhile, as long as Iran could acquire nuclear weapons quickly, Tehran could intimidate others as effectively as if it already had such systems deployed.

None of this, of course, argues for reducing pressures on Iran to curb its nuclear activities. The United States and its allies should continue to do all they can to head Iran off, including efforts to throttle Iran's "civilian" program. Indeed, if all Washington and its allies do is pressure Iran not to acquire nuclear arms openly, without pressuring Iran to give up its "civilian" nuclear efforts, Iran will best them easily by using these civilian facilities to develop a quick nuclear breakout capability, claiming its entire nuclear program is legal under the NPT, and wielding it diplomatically much as it would if it actually had nuclear weapons.

What should we expect when, in the next 12 to 48 months, Iran secures such a breakout option? If the United States and its

allies do no more than they have already done, two things. First, many of Iran's neighbors will do their best to follow its "peaceful" example. Egypt, Algeria, Syria, and Saudi Arabia will all claim that they too need to pursue nuclear research and development to the point of having nuclear weapons options and, as a further slap in Washington's face (and Tel Aviv's), will point to Iran's "peaceful" nuclear program and Israel's undeclared nuclear weapons arsenal to help justify their own "civil" nuclear activities. Second, an ever more nuclear-ready Iran will try to lead the revolutionary Islamic vanguard throughout the Islamic world by becoming the main support for terrorist organizations aimed against Washington's key regional ally, Israel; America's key energy source, Saudi Arabia; and Washington's prospective democratic ally, Iraq.

Early in 2004, senior Saudi officials announced they were studying the possibility of acquiring or "leasing" nuclear weapons from China or Pakistan (this would be legal under the NPT so long as the weapons were kept under Chinese or Pakistani "control"). Egypt earlier announced its plans to develop a large nuclear desalinization plant and is reported recently to have received sensitive nuclear technology from Libya. Syria, meanwhile, is now interested in uranium enrichment. Some intelligence sources believe Damascus already may be experimenting with centrifuges. And Algeria is in the midst of upgrading its second large research reactor facility, which is still ringed with air defense units.

If these states continue to pursue their nuclear dreams (spurred on by Iran's example), could Iraq, which still has a considerable number of nuclear scientists and engineers, be expected to stand idly by? And what of Turkey, whose private sector was recently revealed to have been part of the A. Q. Khan network? Will nuclear agitation to its south and its repeated rejection from the EU cause Turkey to reconsider its non-nuclear status? Most of these nations are now friends of the United States. Efforts on their part to acquire a bomb under the guise of developing "peaceful" nuclear energy (with Latin American, Asian, European, Russian, or Chinese help), will only serve to strain their relations with Washington.

With such regional nuclear enthusiasms will come increased diplomatic pressure on Israel, an undeclared nuclear weapons state and America's closest Middle East ally. In July 2004, the IAEA's

Director General and the major states within the Middle East urged Israel to give up its nuclear arms in proposed regional arms control negotiations. Israel's understandable reluctance to be dragged into such talks or to admit to having nuclear arms now will not end these pressures. If Israel has a secret nuclear arsenal, Arabs argue, why not balance it with Iranian, Saudi, Egyptian, or other covert nuclear weapons programs? How fair is it for the United States and Europe to demand that Middle Eastern Muslim states restrain their own "peaceful" nuclear ambitions if Israel itself already has the bomb and is publicly arguing that it will not be "second" to introduce nuclear weapons into the region? Wouldn't it make more sense to force Israel to admit it has nuclear weapons and then to demand that it give them up in a regional arms control negotiations effort (even though once Israel admits it has weapons, many of its Muslim neighbors, who still do not recognize Israel, are likely to then use Israel's admission to justify getting nuclear weapons themselves)?

This then brings us to the second likely result of Iran becoming ever more nuclear-ready: A more confident Iran more willing to sponsor terrorist organizations, especially those opposed to Israel and the current government in Iraq. With Hamas in decline, Iran already has been seen to be increasing its support to groups like Hezbollah in Iraq, Israel, and Lebanon, groups which want to liberate their lands from American and Israeli "occupation." Increasing its aid to these groups certainly would help Iran take the lead in the Islamic crusade to rid the region of Zionist—American forces and thereby become worthy of tribute and consideration by other Islamic states. Also, bolstering such terrorist activity would help Tehran deter Israel and the United States from striking it militarily.

Beyond this, Iran is likely to increase its assistance to groups willing to risk striking the United States. News reports in August 2004 claimed that Iranian diplomats assigned to UN headquarters in New York were to survey 29 American targets to help terrorist organizations interested in hitting the United States. The aim here appears to be, again, to deter the United States from hitting Iran and to divide U.S. opinion about the merits of backing Israel, or supporting any other anti-Iranian measure or group.

A nuclear-ready Iran is also likely step up its terrorist activities against Iraq, Libya, and Saudi Arabia. Iran already is reported to

have several thousand intelligence agents operating in Shia regions of Iraq and is actively contributing to community associations there. Meanwhile, there are nearly a dozen terrorist organizations operating within Iraq now employing Hezbollah in their groups' names. As in the case of earlier Iranian penetration of Lebanon, these efforts will enable Iran to scout, recruit, and control terrorist operatives. The aim here will be to pressure the United States and its allies to remove their military forces from Iraq, and thereby allow a government more sympathetic to Iran to emerge.

As for Libya, Iran's Mullahs are concerned about how much Qaddafi might tell the United States and the IAEA about what illicit nuclear technology Iran might have gained from Libya, Pakistan, and others. Recent unconfirmed reports indicate Iran has been arming the Libyan Combat Islamic Group at camps in southern Iran; this is an organization Qaddafi expelled from Libya in the late 1990s and the United States expelled from Afghanistan in 2001. If true, these reports suggest how Iran might try to leverage Qaddafi's behavior.

Iran also has a history of supporting terrorist activity in Saudi Arabia. Although only roughly 10 percent of Saudi Arabia's population is Shia, this sect constitutes an overwhelming majority of the population living in Saudi Arabia's key northern oil-producing region. Any terrorist action anywhere in Saudi Arabia, though, tends to raise questions about the general viability of the Saudi regime and the security of the world's largest oil reserves. Historically, after a major terrorist attack in Saudi Arabia, markets worry, the price of oil increases, and Iran's own oil revenues, in turn, surge upward. The reason is simple: Saudi Arabia has the world's largest reserve oil production capacity (roughly 7 million barrels a day). Damage Saudi Arabia's ability to ramp up production or to export what it can produce (or merely raise doubts about the current Saudi government's continued ability to protect these capabilities), and you effectively cripple the world's capacity to meet increased demand for oil internationally. Terrorism in Saudi Arabia, in short, provides Iran with a quick, effective way to manipulate international oil prices. This cannot help but garner Iran greater leverage in getting the Organization of Petroleum Exporting Countries (OPEC) to support its long-ignored calls to increase oil prices. It also will help Iran garner

increased European and Asian regard for its calls for more financial support, investment, and advanced technology. Iranian progress on these fronts is likely to be fortified by Tehran's offers of oil rights to European states, Russia, and China. This, in turn, will help keep the current regime in power longer, will further reduce U.S. influence in the region, and will make action in the UN Security Council (UNSC) against Tehran far less likely.³

Yet, another way Iran could drive up oil prices is by threatening free passage of oil through the Straits of Hormuz or by engaging in naval mining in the Gulf and other key locations, using its surface fleet of fast boats or its smaller submarines as it did in the late 1980s. Iran already has deployed anti-shipping missiles at Qeshm, Abu Musa Island, and on Sirri Island, all of which are in range of shipping through the Strait. It has also occupied and fortified three islands inside the shipping lanes of the Strait of Hormuz—Abu Musa, The Greater Tunbs and the Lesser Tunbs. Given that one-fifth of the world's entire oil demand flows through the Straits (as well as roughly a quarter of America's supply of oil) and no other nation has fortified its shores near Hormuz, an Iranian threat to disrupt commerce there would have to be taken seriously by commercial concerns (e.g., insurers and commodity markets) and other nations.

RECOMMENDATIONS

What are the chances of Iran credibly making these threats? If the United States and its friends do little more than they already have, the odds are high enough to be worrisome.

What more should the United States and its friends do? Ultimately, nothing less than creating moderate self-government in Iraq, Iran, and other states in the region will bring lasting peace and nonproliferation. This, however, will take time. Meanwhile, the United States and its friends must do much more than they are currently to frustrate Iran's efforts to divide the United States, Israel, and Europe from one another and from other friends in the Middle East and Asia; and to defeat Tehran's efforts to use its nuclear capabilities to deter others from taking firm action against Iranian misbehavior.

This is a tall order, one that will require new efforts to:

- Significantly increase the diplomatic costs of Iran ever deploying nuclear weapons or of any of its neighbors following Iran's model of "peaceful" nuclear activity by getting the international community to insist on a tougher view of the NPT.
- Make Russia, Iran's key nuclear partner, a willing backer of U.S. and European efforts to restrain Iran's nuclear ambitions, and a backer of nuclear restraint in the Middle East more generally.
- Reduce the vulnerability of Middle Eastern oil and gas production and distribution systems to Iranian-backed terrorist attacks that could significantly increase energy prices.
- Force Iran into choosing between backing free passage of energy commerce in and out of the Gulf or becoming an outlaw in the eyes not just of the United States, but of Europe and Asia.
- Strengthen U.S. and allied support of Israel by cooperating on a positive Middle Eastern nuclear restraint agenda that Tel Aviv could pace by deeds (rather than negotiation) and highlight the problem of large nuclear facilities located in Iran and the Middle East more generally.

How might these goals be achieved? First, by exploiting or leveraging:

- The desire of all nations to produce some result from the upcoming NPT Review Conference in May 2005 to strengthen the NPT and increase its influence.
- French proposals to the EU and the NPT Review Preparatory Committee to make withdrawal from the NPT difficult and EU sanctions likely for any nation that the IAEA cannot find to be in full compliance with the NPT.
- Russia's long-standing interest in securing a nuclear cooperative agreement with the United States to secure Russia's backing to strengthen nuclear restraints internationally.

- Oil producers' anxieties to increase the security of Saudi oil production and distribution systems from possible terrorist attacks.
- Tehran's desire to secure multinational guarantees to enhance Iran's security and increase its access to critical European high technology imports.
- Israel's clear regional lead in advanced nuclear capabilities.
- Europe's desire to play an active role in promoting nuclear nonproliferation in the Middle East.

Specifically, these levers could be pulled by taking the following steps:

1. Clarify what is peaceful under the NPT. The United States and other like-minded nations should use the occasion of the NPT review conference in May 2005 to convene a series of follow-on meetings dedicated to reevaluating under what circumstances specified forms of nuclear power should be considered to be "peaceful" and thus protected by the NPT. These meetings should take into account the latest information regarding the spread of covert centrifuge and reprocessing technology, bomb design, and the availability of separated plutonium and highly enriched uranium. In addition, they should raise the questions of what nuclear materials and activities can be safeguarded in a manner that will detect potential violations early enough to achieve the IAEA's and the NPT's goal of "preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices." This set of international gatherings, which should meet periodically in anticipation of the next NPT review conference in 2010, should also evaluate how increased use of free market competitions and private financing could help identify uneconomic, suspect nuclear activities. These meetings could be held under IAEA or UNSC auspices. If this proves to be impractical, though, the United States and other like-minded nations should proceed on their own (much as the Proliferation Security Initiative was promoted) to hold these meetings with as many like-minded nuclear power and large nuclear research reactor-capable nations as possible.

2. Establish country-neutral rules for NPT violators. The United States and its allies should build on France's recent proposals that the UNSC adopt a set of a country-neutral rules for dealing with NPT violators, such as Iran and North Korea, which would stipulate that:

- a. countries that reject inspections and withdraw from the NPT without first addressing their previous violations must surrender and dismantle their large nuclear capabilities (i.e., large research and power reactors and bulk handling facilities) to come back into compliance. Until the UNSC unanimously agrees to drop this ban, violators would lose the right to acquire nuclear technology under the NPT (a ban against exporting such help to these nations would be imposed), and international financial institutional support for major projects within their borders would be suspended.
- b. countries that violate their safeguards obligations under the NPT and that the IAEA cannot find to be in full compliance should no longer receive nuclear assistance or exports from any other country until the IAEA Board of Governors is able to unanimously give them a clean bill of health.
- c. countries that build new, large nuclear fuel-related facilities that cannot be justified economically and monitored in a manner that can assure timely warning of diversion of enough nuclear material to make a bomb, should not receive nuclear assistance or exports from another country until the IAEA Board of Governors is able to unanimously agree that the project in question is economically imperative or capable of being safeguarded to provide timely warning of potential diversions.

The idea in passing these resolutions would be to make it clear to both Iran and its neighbors that violating the NPT as Iran or North Korea have done will have consequences for their nuclear programs and for continued international financial institution support. Diplomatically, this will help the United States and its allies identify and treat Iran and North Korea in a country-neutral manner, not as an equal in negotiations, but as legally branded violators of the NPT.

In addition, the United States should encourage the EU, and short of this, the governments of Italy, Germany, and France, to threaten to sanction Iran's nuclear misbehavior by holding up their exports of machinery and materials to Iran, which make up a vast majority of all the imports Iran takes in. The continued flow of these exports is critical to the maintenance of Iran's economy.

3. Offer Russia a U.S. nuclear cooperative agreement. To help secure the support for these resolutions from Russia, the United States should offer Moscow a nuclear cooperative deal that Moscow has long sought. This deal would allow Russia to store U.S. origin spent fuel from Asia and Europe and pocket 10 to 20 billion dollars in revenues from this business. For nearly a decade, U.S. progress on this deal has been stymied in the United States because of Russian unwillingness to drop its nuclear cooperation with Iran. Russia, meanwhile, insists that its cooperation with Iran is peaceful. Moscow has made it clear, however, that it would suspend its nuclear cooperation with Tehran if asked to do so by a resolution of the IAEA or the UNSC. If the country-neutral rules described above were passed, Russia would not have to announce that it was permanently dropping nuclear cooperation on Bushier, only that it was temporarily suspending nuclear cooperation with Iran as required by the resolution. Any resumption of Russian-Iranian nuclear cooperation that violated the resolution, however, would jeopardize continued U.S. consent to send additional U.S. origin spent fuel, which should continue to require case-by-case approval by Washington (as is normally the case) under any nuclear cooperative agreement the United States strikes with Russia.

4. Reduce the vulnerability of the Saudi oil production and distribution system by building additional capacity. In a study conducted for NPEC by energy researchers at Rice University, two key vulnerabilities in the Gulf oil production and distribution system in Saudi Arabia were identified. The first is an Iranian threat to close the Straits. Such a threat, Rice analysts argue, could be significantly reduced by upgrading and complimenting the trans-Saudi Arabian Petroline, which would allow 11 million barrels a day to be shipped to ports on the Red Sea. This could be done with technical upgrades to the trans-Saudi Arabian line and by bringing the Iraqi-Saudi

pipeline (Ipsa-2) back on line. To do the later would require an agreement with Baghdad. The cost of the entire project is estimated to be \$600 million. Assuming the worst—a complete closure of the Straits of Hormuz—this bypass system is estimated to be capable of reducing the economic impact to the United States to a loss of only 1 percent of gross domestic product. This figure could be reduced even further if additional pipelines were built from Abu Dhabi to ports in Oman. There are a number of ways in which these projects could be financed. Given the high price of oil and the large revenue streams high prices are now generating, the best time to finance such construction is now.

The second vulnerability Rice researchers identified is the major oil processing facilities located at Abqaiq. If terrorists were to attack these facilities, the loss could be as high as several million barrels a day of production. Work needs to be done to detail how best to reduce this vulnerability but, again, the time to address these concerns (and finance their fixes) is now when oil prices are high. In the longer run, of course, the steady rise in energy prices is likely to produce both increased conservation and new alternative sources of energy that will reduce U.S. and allied reliance on Gulf oil and gas.

5. Call on Iran to agree to a Montreux Convention to demilitarize the Straits of Hormuz and an agreement to limit possible incidents at sea. One of the constant complaints of Iranian diplomats is that the United States and other major powers are unwilling to negotiate directly with Iran to guarantee its security. Certainly, the United States is loath to negotiate directly with Iran's representatives for fear that this would give its current revolutionary government greater support than it otherwise would have. More importantly, after having been disappointed so many times, Washington officials are rightly skeptical that Tehran is serious about reaching substantive agreements. The Council on Foreign Relations recently highlighted this problem in a report on Iran, which eschewed attempting any grand bargaining with Tehran. Several of America's key European allies and other influential interest groups, however, are inclined to negotiate, if at all possible, incrementally. This suggests that the pressure for talks will persist and that, in some fashion, they will continue. Where should such negotiations be focused? One sensible area, which unlike nuclear and human rights matters (where it is

in Iran's interest to hide its hand or lie and where negotiating with Iran would only lend greater legitimacy to the current regime's bad policies), is demilitarizing and guaranteeing free passage through the Straits of Hormuz and agreeing to naval standards of behavior in and around the Gulf. Securing a Montreux-like agreement for the Straits of the sort in place for the Dardanelles and an incidents at sea agreement like that the United States secured with the Soviets during the Cold War would be in Iran's interest. An agreement regarding Hormuz could assure multipower guarantees to prevent any foreign nation from closing the straits (through which nearly all of Iran's own oil exports flow). It would require submarines—including U.S., Israeli, French, and British special forces vessels—to surface before entering or exiting the Straits. It ultimately (after initial sounding talks with key European nations) would entail negotiations with the United States.

On the other hand, such an agreement would also be in the interest of the United States and its allies. It would require Iran to demilitarize all of the islands and coast it has fortified with artillery and antishipping missiles near or adjacent to the Straits. It would give additional international legal grounds for military action against Iran if it should threaten to close the Straits (by moving Iranian military systems beyond an agreed demilitarized zone, the agreement would help give timely warning of Iranian efforts to cheat and allow superior allied air and reconnaissance capabilities a clear shot at identifiable ground or sea movements). Finally, it would serve as a confined, limited set of talks, the progress of which could be used as a barometer of Iranian seriousness in negotiations generally. Similar benefits could be secured with an incidents at sea like agreement with Iran that might include provisions to restrict any nation's ability to covertly mine key waterways in or near the Gulf.

6. Encourage Israel to initiate a Middle East nuclear restraint effort that would help isolate Iran as a regional producer of fissile materials. Israel should announce that it will unilaterally mothball (but not yet dismantle) Dimona, and place the reactor's mothballing under IAEA monitoring. At the same time, Israel should announce that it is prepared to dismantle Dimona and place the special nuclear

material it has produced in “escrow” in Israel with a third trusted declared nuclear state, e.g., the United States. It should make clear, however, that Israel will only take this additional step when at least two of three Middle Eastern nations (i.e., Algeria, Egypt, or Iran) follow Israel’s lead by mothballing their own declared nuclear facilities that are capable of producing at least one bomb’s worth of plutonium or highly enriched uranium in 1 to 3 years. Israel should further announce that it will take the additional step of handing over control of its weapons usable fissile material to the IAEA when:

- a. All states in the Middle East (i.e., the three mentioned above) dismantle their fissile producing facilities (large research and power reactors, hexafluoride, enrichment plants, and all reprocessing capabilities).
- b. All nuclear weapons states (including Pakistan) formally agree not to redeploy nuclear weapons onto any Middle Eastern nation’s soil in time of peace.

Such arms restraint by deed rather than negotiation should avoid the awkwardness of current Middle Eastern arms control proposals that would have Israel enter into nuclear arms talks with states that do not recognize it and have it admit that it has nuclear weapons—a declaration that would force Israel’s neighbors immediately to justify some security reaction including getting bombs of their own.

7. Back these diplomatic-economic initiatives with increased U.S.-allied anti-terrorist, defense, naval, and nuclear non-proliferation cooperation. A key derivative benefit of pursuing the proposals described above is their potential to frustrate Iran’s efforts to divide the United States from its friends and to deter them from acting against the worst of what Iran might do. Specifically, it would be useful to:

- *Have the United States canvass the EU, international financial institutions, and other nations about their willingness to back an Israeli nuclear restraint initiative of the sort described above.* Clearly, it will make little sense for Israel to launch a nuclear restraint initiative if other key nations merely dismiss it. To help determine its prospects for success, the United States ought to talk with its key allies in Europe and elsewhere to gauge their willingness to back the proposal described. Would

the United Kingdom, France, Germany, and other EU nations see the proposal as a positive step that other Middle Eastern nations should be encouraged to follow? Would they be willing to announce that they would be prepared to provide any Middle Eastern nation that matched Israel's actions help in funding non-nuclear energy systems and smaller research reactors (that cannot make a critical weapon's worth of material in anything less than a decade)? Construction of these facilities might begin once dismantlement commenced. Would international financial institutions, meanwhile, be willing to announce that they would put on hold further loans to states that subsidize or invest in uneconomical large research, desalination, or power reactors and other nuclear bulk handling facilities in the Middle East? If so, Washington should consult with Israel and, assuming Israel's willingness to proceed, announce that America will use existing U.S. cooperative threat reduction efforts to commence securing escrowed Israeli nuclear material and converting this material into appropriate storable form on a schedule that Israel will set.

- *Increase the level and tempo of allied naval exercises in and around the Persian Gulf.* These exercises should emphasize mine-clearing, protection of commercial shipping, nuclear export and import interdictions, and reopening the Straits under a variety of "seizure" scenarios. The exercises should be conducted with as many other interested Gulf and non-Gulf nations as possible.
- *Increase international cooperation to help Iran's neighbors secure their borders against illicit commerce and illegal immigration.* One of the key problems facing Iran's neighbors (especially Iraq and Turkey) is the threat of terrorists and illicit nuclear imports and exports transiting into and out of their territories. Cooperative efforts to secure these borders could be made a part of a larger international effort to help European and other states protect their borders and shores as well against illicit strategic weapons-related imports or leakage. This effort should be made an integral part of President Bush's Proliferation Security Initiative.

- *Consider ways to share the benefits of turn-key missile defense and reconnaissance systems in the Middle East in a manner that would avoid compromising these systems.* The utility of missile defense and reconnaissance cooperation with friendly nations is clear enough. The dangers of sharing more than one are less obvious but no less real.⁴

As noted in the overview, none of these proposals can guarantee Iran will not go nuclear. Assuming the United States continues to stick by its key friends in the Middle East, though, these measures will give Iran and its neighbors much greater cause to pause in further violating the NPT. More importantly, they will go a long way toward frustrating Iran's efforts to divide and deter the United States and its major allies from taking firm actions against the misdeeds Iran would otherwise be tempted to do once it becomes nuclear ready. Finally, and most important, these proposals, if implemented, are much more likely in the near-term to restrain Iran's nuclear enthusiasm and that of its neighbors than any effort to bargain over Tehran's nuclear capabilities, or to try to bomb them. In the end, however, only Iran's eventual transition to more moderate self-rule will afford much chance for lasting, effective nonproliferation. Until then, the suggestions noted above are our best course.

ENDNOTES - CHAPTER 1

1. For background, see *Checking Iran's Nuclear Ambitions*, Carlisle, PA: U.S. Army War College, 2004, at <http://www.npec-web.org/pages/checkiran.htm>.

2. For a discussion of how best to reduce the risks associated with power reactors see NPEC's detailed technical analysis, Victor Gilinsky, *et al.*, *A Fresh Examination of the Proliferation Dangers of Light Water Reactors*, at <http://www.npec-web.org/projects/NPECLWRREPORTFINALII10-22-2004.pdf>.

3. The current Iranian regime thrives on corruption and central planning, both of which require ever larger amounts of cash.

4. For a detailed discussion of these issues and how best to manage them, see NPEC's commissioned research, "Missile Nonproliferation and Missile Defense" and "Controlling Unmanned Air Vehicles: New Challenges," at http://www.npec-web.org/published/hl_761.pdf and <http://www.npec-web.org/projects/uavs.pdf>, respectively.

PART II

TEHRAN'S NUCLEAR ENDEAVORS: WHAT'S THE WORRY?

CHAPTER 2

ARAB SECURITY RESPONSES TO A NUCLEAR-READY IRAN

Richard L. Russell

The current American and international attention on Iran's suspected nuclear weapons aspirations is high, but Tehran's belated admissions and continued maneuvering with the International Atomic Energy Agency (IAEA) may, in the medium to longer runs, allow Iran to press ahead with a clandestine nuclear weapons program. Tehran probably looks to the North Korean model in which Pyongyang ostensibly conformed to the Nonproliferation Treaty (NPT) to politically diffuse any international or American resolve for preemptive military action to stem North Korea's nuclear weapons program. After establishing a minimal nuclear deterrent, North Korea was able to publicly withdraw from the NPT and announce its nuclear weapons capabilities to up the ante for any consideration of American-instigated military action against the hermit kingdom. Tehran also can look closer to home to Iraq's unsuccessful bid for nuclear weapons in the run up to the 1990-91 Gulf war. Saddam managed to remain in good standing with the NPT, while harboring an enormous nuclear weapons infrastructure that would have produced a nuclear weapons arsenal had Saddam not provoked international military intervention with his invasion of Kuwait. The lessons from North Korea and Iraq underscore for Iran how it is possible to continue working on nuclear weapons even with the presence of IAEA inspectors on the ground, while parlaying "compliance" with the NPT safeguards against international military action against suspected nuclear weapons-related sites and infrastructure.

Iran's confidence that it can pursue a clandestine nuclear weapons program under the watchful eye of the IAEA may be bolstered by American preoccupation with Iraq. The American military is stretched thin with operations against insurgents in Iraq and would be poorly suited to undertake yet another ambitious military campaign against

neighboring Iran. American political legitimacy also is strained over the course of events in Iraq. Moreover, domestic and international confidence in the quality of American intelligence is in doubt after an apparently less than stellar performance against Saddam's Iraq. For all of these reasons, Iran might calculate that the Americans are ill-prepared to move militarily against its nuclear weapons program.

Public and policy debate on Iran has focused on Tehran's bid for nuclear weapons, but significantly less attention is paid to the regional consequences if Iran is eventually successful in evading IAEA safeguards and acquiring nuclear weapons. To the extent that regional reaction to Iran's drive for nuclear weapons or its eventual possession of nuclear weapons is addressed, it is devoted largely to the dilemmas for American and Israeli policy. While Iran straddles the Middle East and South Asia, the major powers in South Asia — Pakistan and India — already have nuclear weapons, and their security perception is likely to be less startled by Iran's acquisition of nuclear weapons than those in the Arab world. Parenthetically, Islamabad appears to have cast aside any long-term strategic concerns about Iranian nuclear weapons in favor of short-term financial windfalls from aiding Iran's nuclear weapons program.

But Arab states too will face new security challenges and burdens if faced with Iranian nuclear weapons capabilities. Authoritative Arab debate and discussion of the impact of Iranian nuclear weapons has not yet surfaced and probably should not be expected. Arab states, for all intents and purposes, still consider the public debate and discourse of national security policies to be taboo. Notwithstanding the arrival of satellite television and cable news programs, Arab public discussion of national security is muted, and what little does get aired publicly is intellectually superficial and resembles platitudes rather than hardheaded strategic analysis.

In light of the paucity of public sources, a great deal of analytic speculation, as well as analysis based on off-the-record conversations with officers and diplomats from the region, are required to answer the question, "How will Arab states react and respond to a nuclear-ready Iran?" This chapter sets the analytic scene by examining Arab threat perceptions of Iran writ large. The chapter assumes that most regional states believe that over the next 5 to 10 years Iran could

readily and rapidly have nuclear weapons, even if Tehran does not make a formal policy declaration or detonate a nuclear device to demonstrate its nuclear power status. The chapter examines Arab perception of American and Israeli security, which is intertwined intimately with Arab contemplation of Iranian nuclear weapons capabilities. The chapter then discusses likely courses of action by Arab states nearest Iran in the Persian Gulf, as well as Arab states geographically located farther afield in the Levant and northern Africa. The chapter concludes with a discussion of the options and limitations for U.S. policy in stemming political-military pressures on Arab states to redouble their weapons of mass destruction (WMD) and delivery system programs in the aftermath of a suspected or demonstrated Iranian nuclear weapons stockpile.

ARAB THREAT PERCEPTION OF IRAN

Arab states traditionally have worked to balance Iranian power in the Persian Gulf and Middle East. Most of the Arab states, with the notable exceptions of Syria and Yemen, politically, economically, and militarily backed Iraq in its war with Iran out of concern that Iranian forces threatened at various stages in the 1980-88 war to overwhelm Iraqi forces, thus gaining a strategic foothold in southern Iraq from which Tehran could exercise a stranglehold on Kuwait and Saudi Arabia. Such a course of events would have positioned Tehran to better export its then revolutionary zeal to undermine moderate Arab states throughout the region and to dominate the regional distribution of power.

The Iran-Iraq war depleted Iranian political, military, and economic power and reduced the acuteness of Arab threat perception of Iran during the 1990s. The substantial American military presence in the region as a legacy of the 1990-91 war to monitor and deter any renewed Iraqi military ambitions in the Gulf, reassured Arab Gulf states that neither Iraq nor Iran would be able to mount an ambitious military campaign to upset the regional balance of power. Iran's election in 1997 of President Khatami, who was widely perceived as a moderating political influence in Tehran, dampened Iran's zeal for exporting the Islamic revolution and led to a further easing of the Arab threat perception of Iran.

The American ouster of Saddam Hussein's regime in Iraq may have diminished further Arab concern about Iran's ability to leverage its geopolitical mass to dominate the Gulf. Arab states are in awe, if only privately, of American military capabilities that they witnessed slash through the massive Iraqi forces widely regarded as the most formidable Arab military forces in 1990. Arab military forces too must be impressed with the relative ease with which American and British forces smashed through Iraq to occupy Baghdad. Arab states must calculate that as long as American forces occupy Iraq, Tehran would not dare to undertake any conventional military operations to challenge the Gulf distribution of power. Indeed, many Arab officers and diplomats today are more concerned about American political and military intentions in the Gulf than they are about Iran in its weakened political, military, and economic condition.

The public disclosures in 2002 and 2003 about the scope and sophistication of Iran's nuclear weapons program is just beginning to seep into the strategic calculations of Arab diplomats, officials, and military officers. The Arab states have been slow to perceive the strategic threat posed by Iranian nuclear weapons. As Judith Yaphe observes, the Gulf Cooperation Council states, "have shrugged off dire predictions of the dangers of a nuclear armed Iran."¹

The author's discussions with a wide array of senior military officers and diplomats from the Middle East reveal a fairly commonly held view that Iranian nuclear weapons would have a stabilizing effect on the region. These officials and officers observe that Israel and the United States both have robust nuclear weapons capabilities while Arab states do not, and only one Muslim state, Pakistan, does. They reason that Iranian nuclear weapons would have salutary effects on regional security because Tehran's nuclear arsenal would "balance" Israeli and American nuclear weapons. The implicit assumption of this line of reasoning is that Israel and the United States have political, military, and economic ambitions in the region that could only be checked by Muslim nuclear weapons, even if in the hands of the Farsi-speaking Islamic regime in Tehran.

The superficial reasoning behind this Arab strategic thought may reflect the equivalent of an intellectual "knee jerk" reaction. As time passes and the reality of an Iran armed with nuclear weapons comes

into sharper focus, Arab diplomats and officers are more likely to come to grips with the dilemmas posed by a nuclear-armed Iran. They will have to worry that American security backing of Arab states may lessen in the face of Iranian nuclear weapons. Arab security policy officials would have to concede that the United States might be less willing to come to Arab states' aid in the event of a future regional crisis in which Iran wields nuclear weapons. Had Iraq had nuclear weapons in 1990, for example, the risks and potential costs of an American military campaign to liberate Kuwait would have been greater and might have led the United States to accept Iraq's occupation of Kuwait as a *fiat accompli*. In a future regional contingency, the Iranians could make limited land grabs in the Persian Gulf—whether against Iraq, Kuwait, or the United Arab Emirates—and hope to hold American conventional forces at bay with the threat of Iranian nuclear weapons. Iranian nuclear weapons too would afford Tehran the titular leadership role in the Gulf and give it substantial political sway with the Arab Gulf States.

Arab states also will have to worry that Iran's possession of nuclear weapons will embolden Tehran to revert to a more aggressive foreign policy. The clerical regime might calculate, for example, that it could give more material assistance and lessen restrictions on Hezbollah to engage in operations against Israeli and American interests. The Iranians have supported Hezbollah operations against American forces as an appendage of Iranian foreign policy to push the Americans out of the Gulf, most notably in assisting Saudi Hezbollah attacks against the Khobar Towers. Tehran might calculate that it could support an even more ambitious unconventional terrorist campaign against American forces in the Gulf and the smaller Arab Gulf states that host American forces if it has a nuclear weapons arsenal. Tehran might assess that, even if its hand is exposed, the risks of American military retaliation would be minimal, given Iranian nuclear weapons. If push came to shove, Tehran could use nuclear weapons against American military assets or hosting countries in the region with Iranian ballistic missiles, or clandestinely insert them into the United States to directly target American cities and citizens.

ARABS WEIGHING AMERICAN AND ISRAELI REACTIONS

Scratching the analytic surface of the dilemmas posed by Iranian nuclear weapons will lead Arab defense planners to contemplate American and Israeli security policies. For Arab states, the United States and Israel are the “bulls in the china shop” whose actions will have to be gauged in mapping out Arab reactions to Iranian nuclear weapons. How the United States and Israel behave toward an Iran armed with nuclear weapons will affect their security policies and strategies.

Arab officials already are alarmed at what they see as an American precedent for waging preemptive or preventive war. While American security studies scholars are careful to distinguish preemptive war as moving militarily first in a crisis against an adversary, and preventive war as moving to stop an adversary from growing too powerful, particularly with nuclear weapons, Arab officials appear to use these terms in conversations in English interchangeably. Arabs worry that the United States will move militarily against Iran either before or after Iran acquires nuclear weapons by using its military position in the Gulf to bring forces to bear against Iran.

The Arab states worry that they will be caught in a crossfire in an American military campaign against Iran. The Saudis, for example, may hope that the ending of the American military footprint in Saudi Arabia will lessen the potential for Saudi Arabia to become embroiled in a future conflict with Iran. The Saudis, after all, resisted the investigation of the 1996 Khobar Towers bombing which killed numerous American servicemen out of fear that it would uncover Iranian ties to the operation and put the Kingdom in the middle of an American-Iranian conflict. The Gulf states, particularly Saudi Arabia, also worry that American military operations against Iran would give the Americans potentially too great an influence over the global oil market.

The Arab states will be concerned about Israeli preemptive or preventive military action. The Arab regimes especially will worry that Israeli military operations against Iran—whether by air or sea—would spark street demonstrations that could spark public resentment against Arab regimes. Despite their worst fears in the run up to

the 2003 war against Iraq, “the Arab street” was muted. But Arab regimes will worry that Israeli military action against Iran would prove to be more volatile politically than American military action against Iraq had been. Arab military officers and diplomats have a hard time, though, understanding Israel’s perception of geographic vulnerability and the severe security demands that Iran’s acquisition of nuclear weapons would have on Israeli defense policy.

The Arab world has a begrudging respect for Israeli air power, in particular due to its prowess demonstrated in the Arab-Israeli wars, air battles with Syrian aircraft in struggles over Lebanon, the air strikes against Palestine Liberation Organization (PLO) headquarters in Tunis, and the preventive air strikes against Iraq’s nuclear reactor. The mystique of Israeli air power, however, probably is larger than reality in the case of Iran, which is located a far reach from Israeli airspace.² Depending on the flight route, Israeli aircraft would have to violate Jordanian, Syrian, Iraqi, or Saudi airspaces to strike Iranian targets. While some speculate that Israel could gain basing support to launch aircraft from Turkish bases, Ankara’s unease with working with the Americans vis-à-vis Iraq shows how squeamish the Turks are over relations with their southern neighbors. The Israeli air force’s ability to generate sorties for a sustained air bombardment of Iranian nuclear weapons-related facilities, moreover, pales in comparison of that of the United States which enjoys wide access in the Persian Gulf, both in host countries and based on aircraft carriers.

Tel Aviv, for its part, will try to work closely with Washington on the shared threat from Iran’s nuclear weapons. In November 2003, the head of the Israeli intelligence service, the Mossad, told the Israeli Knesset that Iran’s nuclear weapons program represented “the biggest threat to Israel’s existence since its creation” in 1948.³ The Israelis would be relieved to have the Americans carry the lion’s share of the burden for working diplomatically and, if necessary, militarily to stop Iran’s nuclear weapons drive.

THE GULF NEIGHBORHOOD

The policy plate of U.S. security officials is already overflowing with its current load of security responsibilities, and the contemplation or implementation of yet another formidable security task represented

by moving militarily—even in a limited air campaign—against Iran’s nuclear weapons infrastructure may simply be one bridge too far for American policymakers. Should the United States be unable or unwilling to use military actions against Iran’s nuclear weapons program, Tehran will likely acquire nuclear weapons sooner rather than later. How, then, are Arab states likely to react in the next 5 to 10 years to a suspected or demonstrated Iranian nuclear weapons stockpile and robust ballistic missile inventories as delivery means?

Arab Gulf states will feel the Iranian threat most acutely. Iraq, for example, will continue to see Iran as the largest and most formidable national security threat in the region regardless what shape, form, or nature the post-Saddam government in Baghdad eventually takes. A relatively transparent, moderately disposed government in Baghdad probably would want American military reassurance to shore up its security vis-à-vis Iran. The Iraqis might be amenable to residual American and international ground and air forces hosted in Iraq. The Iraqis might want a profile small enough to minimize charges by political opposition that the Iraqis are subservient to the Americans, but large enough to serve as a “trip wire” to deter Iranian military ambitions against Iraq, particularly as Iraq’s new armed forces are just taking root. The American presence in Iraq also would reassure Iraqis that the Iranians could not parlay their nuclear weapons for political coercion against Iraq.

The Iraqis, too, probably will want force projection capabilities to deter Iranian military activities as well as to strike Iran in the event that deterrence fails. The residual American and international presence in Iraq might work to dampen Iraqi interests and ability to restart ballistic missile programs to match Iran’s ballistic missile capabilities. The Iraqis, though, probably would press the United States and the West for advanced air force capabilities to project power and to compensate for not resuming ballistic missile endeavors. Parenthetically, while much public discussion has centered on the size and nature of Iraq’s post-Saddam army, little debate has touched upon the legitimate air power needs of the future Iraq.

Over the longer run, the withdrawal of American and international forces from Iraq probably would heighten Iraqi fears vis-à-vis Iran’s nuclear weapons arsenal. Even if Iraqi conventional forces evolve

into relatively modern, professional, and capable forces—albeit in fewer numbers than the forces during Saddam’s rule—the Iraqis will be under strong pressure to contemplate resurrecting Iraq’s nuclear program to counterbalance Iran’s nuclear weapons inventory. From Baghdad’s perspective, Iran could parlay its nuclear weapons advantage to politically coerce Iraq. The Iranians, for example, could embark on an aggressive campaign to support Iraqi Shia opposition in the south or challenge the Shat al Arab, calculating that Baghdad would be deterred by Iranian nuclear forces from undertaking conventional military reprisals across the border. The Iraqis would have to worry that, should they seek to strike conventionally against Iran, Tehran could resort to tactical nuclear weapons to destroy Iraqi forces on the battlefield.

A Turkish decision to acquire nuclear weapons in response to Iran’s nuclear arsenal would further increase Iraq’s incentive to resurrect its nuclear weapons programs. A deterioration in Turkish-American relations, coupled with failed efforts to gain entry into the EU, over time could lead Ankara to be substantially less confident in NATO’s resolve to come to Turkey’s defense in the event of a military contingency with Iran. The Turks might then calculate that they need to have their own, independent nuclear deterrent as a hedge against Iran’s nuclear forces, as well as future nuclear weapons aspirants to Turkey’s southern borders.

Saudi Arabia has worked to restore diplomatic ties with Tehran that were ruptured by the Iranian revolution and the Iran-Iraq war, but Tehran’s possession of nuclear weapons is likely to cause discomfort in the kingdom. While the restoration of normal diplomatic relations appears on the surface to ease tensions, neither the Saudis nor the Iranians have abandoned their traditional aspirations to be the most influential nation-state in the Gulf. The Saudis are likely to view Iran’s acquisition of nuclear weapons as a substantial Iranian effort toward politically and militarily dominating the Gulf. The Saudis probably would suffer a sense of political humiliation that the Iranians have the political prestige or reputation for power that accompanies nuclear weapons.

Iranian nuclear weapons would add already substantial political-military incentive for Saudi Arabia to pursue its own nuclear weapons capabilities. The Saudis have limited conventional

military capabilities to defend their large geographic space from outside threats, the most serious of which, Iran and Iraq, could be armed with nuclear weapons. The Saudis worried in the Iran-Iraq war that Iranian forces would defeat Iraqi forces in southern Iraq to threaten Kuwait and the eastern province of Saudi Arabia. The Saudis would have to worry that a nuclear-armed Iran could again militarily threaten the Gulf. The Saudis, too, would have to worry about the foreign policy orientation of the future government in Iraq and hedge against the specter of Iraq in the long run, tapping its technical expertise to resurrect a nuclear weapons program. The Saudis also harbor deep mistrust of Israel and resent Israeli military prowess and nuclear weapons capabilities.

The Saudis, too, have a wary eye on the military power of the United States. The Saudis have been shaken by post-September 11, 2001, events. They were shocked both by signs of formidable domestic political opposition against the Saudi regime and internationally by the anger in the United States over the stark, if belated, recognition that Saudi Arabia was a hotbed for al-Qaeda. The political backlash in the United States must have heightened Saudi concern that the United States could one day pose a threat to the Kingdom. Although this concern is never uttered, Saudi officials remember that the Kingdom was vulnerably dependent on the United States for its survival in the 1990 war. It would not take too much Saudi imagination to appreciate that the United States, with its 500,000 troops then stationed in Saudi Arabia, could have forcibly taken over the Kingdom in a couple of days. The Saudis today probably worry that that United States could, in the future, “overreact” to an al-Qaeda attack against American interests with retaliatory strikes or military occupation in Saudi Arabia, much as the Americans have done in Afghanistan and Iraq.

A Saudi nuclear weapons capability would work strategically to shore-up Saudi insecurities vis-à-vis Iran’s nuclear weapons capabilities, but also against potential hostile actions in the longer run from Israel, Iraq, and the United States. The Saudis have already taken several steps in this direction. In the 1980s, unknown to the United States, they secretly negotiated for and purchased intermediate range CSS-2 ballistic missiles from China. According to Anthony

Cordesman, the Saudis purchased 50-60 CSS-2 missiles, 10-15 mobile launchers, and technical support from China.⁴ The missiles would be ideal for delivering nuclear weapons, but poorly suited for the delivery of conventional munitions because they are very inaccurate and too limited in numbers in the Saudi arsenal to be used in the massive missile barrages with the conventional weapons necessary to compensate for inaccuracies. The missiles, moreover, were sold from Chinese operational nuclear force inventories. Although Beijing and Riyadh claim that the missiles in Saudi Arabia are armed with conventional weapons, no American or international observers have been allowed by the Saudis to inspect and independently verify Chinese and Saudi claims.⁵

The international revelations in 2003 about the scope and depth of Iran's nuclear weapons-related activities have brought to the public domain reports of Saudi contemplation of nuclear weapons with the assistance of Pakistan. The British newspaper, the *Guardian*, reported that Saudi officials have admitted that, in light of Iran's nuclear weapons program and the post-September 11 security environment, the Kingdom is considering a variety of national security policy options, one of which is the pursuit of nuclear weapons.⁶ Other press reports allege that then Saudi Crown Prince Abdullah bin Abdulaziz traveled to Pakistan in October 2003 and secured a secret agreement with President Pervez Musharraf, under which Pakistan will provide the Saudis with nuclear-weapons technology in exchange for cheap oil.⁷ Naturally, Pakistani and Saudi officials deny these reports, but both Pakistan and Saudi Arabia have national interests consistent with such a course of actions. Pakistan needs money to support its military competition with India, while Saudi Arabia needs a deterrent to compete with Iran and Israel, and as a hedge against a distancing of security ties with the United States.

While a body of circumstantial evidence suggests that Saudi Arabia has the interests, means, and intentions to lean toward a nuclear weapons option, there is little to suggest that the smaller Gulf Arab states are as far along in their strategic thinking as Saudi Arabia. To greater and lesser degrees, Kuwait, Bahrain, Qatar, the United Arab Emirates (UAE) and Oman gauge a threat from Iran in general. Yemen, on the other hand, takes great reassurance from its geographic separation from Iran and sees little to no direct military

threat coming from Tehran. Yemen's security preoccupation, despite Iranian nuclear weapons in the Gulf region, will continue to be its neighbor to the north, Saudi Arabia.

The richer small Arab Gulf states have the financial wherewithal to purchase nuclear weapons and delivery systems, but they would face obstacles in moving along such a strategic path. China and Pakistan, for example, probably are more willing to press the envelope of risk with international and American backlash for public discovery of clandestine WMD-related dealings in exchange for the strategic prize of security ties with Saudi Arabia, the richest and one of the three major states in the Gulf balance of power, but they might be less willing to take these risks for the sake of security ties with the smaller Gulf states. The Chinese and Pakistanis might be more concerned with the operational security of any clandestine WMD cooperation with the smaller Arab Gulf states, recognizing that they need strong ties with the Americans that would increase the risk of public exposure. The Saudis, in contrast, have proven themselves adept at keeping secrets from the Americans. While Saudi Arabia may calculate that it could survive the international and American opprobrium that would accompany revelations of a Saudi nuclear weapons program, the smaller Arab Gulf states would have to worry that exposure of nuclear weapons aspirations would alienate their security backers—namely the United States and Saudi Arabia—which are the cornerstones for ensuring their autonomies from the larger states of Iraq and Iran.

Small Gulf Arab state efforts to develop their own nuclear fuel cycles and nuclear power plants under the guise of civilian electric power generation would be a long and expensive undertaking. Such a course of action, moreover, might set off international alarm bells in light of Iran's successful exploitation of this route for acquiring nuclear weapons. The small Arab Gulf states might be less able than Iran to ride out international criticisms of ostensible civilian nuclear power infrastructure; they are far more dependent on critical trade and security from the West than Iran and therefore more vulnerable to the effects of international economic sanctions and ruptures in bilateral security arrangements, particularly with the United States, Britain, and, to a lesser extent, France. The small Gulf Arab states, too,

would have to worry that their nascent nuclear power infrastructure would be vulnerable to preventive and preemptive attacks from larger regional powers.

The notable exception to this line of reasoning might be the UAE, which perceives the Iranians as a threat more acutely than their Gulf Arab counterparts. The UAE still harbors resentment toward the Iranians for their occupation of the contested territories of Greater and Lesser Tunbs and Abu Musa Islands.⁸ The UAE might calculate that Iran's nuclear weapons will reduce, if not eliminate, what little incentive Tehran has to negotiate a settlement to the island disputes, as well as embolden Tehran to take even more assertive actions against the UAE.

The UAE has demonstrated a willingness to spend top dollar for defense as evident in procurement of combat aircraft from France and the United States, as well as *Scud* missiles from North Korea. The UAE blindsided the United States when Dubai purchased *Scud-B* missiles from North Korea in 1989, according to Simon Henderson.⁹ Dubai is suspected of having six *Scud-B* launchers.¹⁰ The UAE might see its *Mirage* 2000 and its F-16 aircraft as ideal nuclear weapons delivery systems and could turn to Pakistan for technical assistance. These aircraft and well-trained UAE pilots could readily navigate the Persian Gulf to hold at risk Iran's nuclear weapons infrastructure at Bushier and major naval facilities at Bandar Abbas. The UAE, moreover, has demonstrated willingness to purchase controversial weapons systems such as *Scud* missiles and suffer economic sanctions as a consequence. The Chinese and the Pakistanis might be willing to undertake the risk of exposure for substantial economic reward to assist the UAE in developing nuclear, chemical, or biological payloads for its combat aircraft or ballistic missiles.

THE LEVANT NEIGHBORHOOD

Iran's acquisition of nuclear weapons will have security repercussions for Arab states beyond the immediate Persian Gulf area. Syria and Egypt are geopolitically central to Middle Eastern security and will see their interests most directly affected by Iran's nuclear weapons power. Concerns about the prospects of Syrian or Egyptian nuclear weapons programs, however, have been muted in part due

to the economic weaknesses of both states. Common wisdom holds that nuclear weapons programs often are prohibitively expensive undertakings that put the nuclear weapons option beyond the grasp of many nation-states with poor, if not dysfunctional, economies, such as Syria and Egypt.

A cursory look at reality shatters that common assumption. Two of the world's poorest and most ineffective economies in Pakistan and North Korea illuminate the stubborn fact that countries with an expert technical elite and the determination to siphon off scarce financial resources from their economies can defy reasonable assumptions and establish nuclear weapons programs. Pakistan and North Korea are estimated to have 2002 per capita gross domestic product (GDP) of \$462 and \$903, respectively.¹¹ Egypt and Syria have estimated 2002 per capita GDPs of \$1,190 and \$1,100, respectively,¹² which puts Cairo and Damascus on a richer footing than both Islamabad and Pyongyang. And like Pakistan and North Korea, Syria and Egypt have black market means for making funding streams for clandestine nuclear weapons programs. With the Pakistani and North Korean nuclear weapons histories in mind, one should not be too confident in dismissing futures in which the poorly performing economic states of Syria and Egypt embark on nuclear weapons programs.

Syria, at least initially, might take some solace from Iran's nuclear weapons stocks. Damascus is increasingly isolated and in a weakened regional security position. It is encircled by states that enjoy strong security relationships with the United States; Israel to the southwest, Jordan to the south, Iraq to the east, and Turkey to the north. Syria, while the reigning influence in Lebanon, has only Iran to cooperate with in regional politics against the other regional powers influenced by the United States. In the short term, Damascus might welcome Iran's nuclear weapons as a means to bolster, by association, its marginal regional power.

Over the longer run, Syria probably would come to see the negative strategic consequences of Iranian nuclear weapons. If, in response to Iranian nuclear weapons, Turkey and Iraq pursue nuclear weapons options, Syria will see its power position in the region deteriorate even further.¹³ Turkish or Iraqi nuclear weapons will add to the already strong Syrian strategic incentive to pursue nuclear weapons because Damascus views Israel as its most formidable security threat.

The Syrian regime is isolated politically and might calculate that it has no other means to ensure its survival other than a nuclear deterrent. Damascus might calculate that it has no alternative to running the risk of Israeli military action in the near and medium terms in order to achieve a margin of security in the longer run under a nuclear umbrella. The Syrians have a rudimentary nuclear infrastructure upon which to build.¹⁴ But aside from the formidable technical obstacles for acquiring the fuel cycle infrastructure to support a nuclear weapons program, Damascus would have a major challenge keeping its nuclear program secret to avoid provoking Israeli preemptive or preventive military action either against Syria's clandestine nuclear weapons infrastructure or against the regime itself. Tel Aviv probably could not tolerate Syrian possession of nuclear weapons, and, unlike the case of Iran, Israel has more than sufficient military capabilities needed to wage a sustained air campaign to damage Syrian political, military, and economic nodes significantly.

Syria could respond more readily to accelerated regional nuclear weapons proliferation by strengthening its "poor man's nuclear weapon option." The Syrian conventional military is dying on the vine since it lost its principal military backer with the collapse of the Soviet Union. Today, Syria's conventional military is less capable on the battlefield than the Iraqi military of the 1991 war. The Syrian military is a thoroughly political institution unable to compete with Israel's military on the battlefield. Damascus compensates for conventional military inferiority by relying on chemical, and perhaps biological, weapons and ballistic missiles to deter Israeli military action. Undersecretary of State for Arms Control John Bolton testified to a House hearing in September 2003 that Syria has "a stockpile of the nerve agent sarin that can be delivered by aircraft or ballistic missiles, and has engaged in the research and development of more toxic and persistent nerve agents such as VX." Bolton also stated that Syria "is continuing to develop an offensive biological weapons capability" and expressed concern about Syria's nuclear activities, noting that Russia and Syria "have approved a draft program on cooperation on civil nuclear power."¹⁵ Damascus probably will redouble efforts in the chemical and biological weapons arenas to

shore up its weak deterrent capabilities against Israeli, Turkish, Iraqi, and Iranian conventional and nuclear forces in the distant future.

The Syrians would have to depend on their substantial ballistic missile forces to deliver chemical or biological weapons against regional threats because of the uncertainty over their air force capabilities. Only Syria's ballistic missiles would stand a chance of penetrating Israeli airspace, probably even with the deployment of the Israeli *Arrow* ballistic missile defense system which cannot be entirely foolproof. Syria's air force would be an unreliable means to deliver WMD payloads, given the exceptionally poor performance of Syrian aircraft and pilots against Israeli forces in the air battles of the 1980s in which Israel downed some 80 Syrian aircraft without a loss of one Israeli. The Syrians have 18 *Scud-B* launchers with 200 missiles, 8 *Scud-C* launchers with 80 missiles, and an unknown number of *Scud-D* missiles.¹⁶

The Syrians appear to be working on modernizing their ballistic missile forces in fits and starts. "Syria tested a 700-kilometer range *Scud-D* on September 23, 2000, following a successful test of Israel's *Arrow* missile defense system."¹⁷ Syria also could look to acquire more modern, mobile, reliable, and accurate ballistic missiles such as the M-9—whether from China directly, or indirectly from Pakistan. Syrian President Bashir has yet to demonstrate much prudence in regional politics and might be persuaded by Syria's old guard military that new missiles will bring Syria greater security and influence vis-à-vis Israel. Tel Aviv might, in turn, shatter that Syrian assessment and judge that such a change of the status quo is unacceptable and militarily move against Damascus, particularly since Damascus is in a profoundly weaker position in the Middle East than it had been during the Cold War.

Egypt is geographically farther from Iran and does not feel the direct Iranian military threat as acutely as those states located closer. Nevertheless, Cairo is likely to view Iran's nuclear weapons as another blow to the Egyptian worldview as the leader in the Arab and Islamic worlds. As journalist Nicholas Kralev observes, "Egyptian politicians, intellectuals, and journalists are worried that their country is losing its status as a major regional player in the Middle East."¹⁸ The blow to Egyptian prestige because of Iran's

nuclear weapons status may not be sufficient in and of itself to alter Egypt's restraint from a nuclear weapons program, but it adds to an already large pile of incentives to pursue nuclear weapons.

Egypt had incentive to contemplate nuclear weapons well before Iran's nuclear weapons come to the foreground in regional politics. The Egyptians, notwithstanding the peace treaty with Israel, have long resented Israel's nuclear weapons program that they see as a substantial source of Israeli political leverage over Egypt and the other Arab states. Cairo has long pressed diplomatically for a nuclear free zone in the Middle East as a means to negotiate away Israel's unilateral nuclear weapons advantage in the region. Cairo has long warned that it could reconsider its nuclear weapons restraint if the Israelis indefinitely refuse to negotiate for a nuclear free zone.

Egypt does have a nuclear power infrastructure upon which to begin a program with military applications. In the 1970s, Egypt may have debated pursuing nuclear weapons, but the peace treaty with Israel, aid from the United States, and limited financial means derailed a policy in this direction.¹⁹ Nevertheless, the Egyptians have a nuclear research center with a Soviet-supplied two megawatt research reactor that started in 1961, and an Argentine-supplied 22 megawatt light water reactor that started in 1997.²⁰ The Wisconsin Project estimates that the Argentine reactor gives Cairo access to bomb quantities of fissile material, possibly enough plutonium to make one nuclear weapon per year.²¹ If the Egyptians were to embark on a nuclear weapons program based on its nuclear power infrastructure, they would have to move gingerly much as the Syrians to reduce the risk of Israeli military action. Cairo, however, might judge that it would face less of a risk from Israeli military action than Syria because of Egypt's security relationship with the United States. Cairo could also calculate that Tel Aviv would be loath to undertake military action that would threaten the Egyptian-Israeli Peace Treaty and risk the return of hot wars between Arab states and Israel.

The Egyptians, much like the Syrians, also could redouble their "poor man's nuclear weapon" option. The Egyptian military in the 1980s modernized its chemical warfare agent production facilities to manufacture the nerve agents and even cooperated with Iraq on chemical weapons; in 1981 Iraq gave Egypt \$12 million to expand

Egypt's chemical agent production facilities and, in return, Cairo assisted Baghdad in the production and storage of chemical weapons agents.²² And the Egyptians could undertake similar modernization efforts of their suspected biological warfare capabilities. "In 1996, U.S. officials reported that by 1972 Egypt had developed biological warfare agents and that there was no evidence to indicate that Egypt has eliminated this capability and it remains likely that the Egyptian capability to conduct biological warfare continues to exist."²³

Egyptian and Syrian pursuit of the "poor man's nuclear option" might prove in the end to be only stopgap measures. The Egyptians and Syrians, drawing lessons from the 1991 and 2003 wars against Iraq, might conclude that nuclear weapons are inherently greater sources of deterrence than chemical and biological weapons. The Iraqis had robust chemical and biological weapons inventories in 1991, and the United States believed that Baghdad had retained some of these capabilities in the run-up to the 2003 war. The American campaign against Saddam probably has shaken Egyptian and Syrian confidence in the deterrence value of chemical and biological weapons because the U.S. perception of Iraqi chemical and biological weapons stores was insufficient to deter the United States from waging a war against Baghdad. Israeli, American, and Iranian possession of nuclear weapons might pressure Syria and Egypt to pursue nuclear weapons as the ultimate guarantor of their securities.

The Egyptians appear to be continuing efforts to modernize their ballistic missile forces, which could be used as a foundation for a nuclear weapons deterrent posture. The Egyptians probably already have on hand at least 24 *Scud B/C* launchers with about 100 missiles.²⁴ The Wisconsin Project assesses that the long-standing relationship with North Korea has given Egypt the capability to indigenously produced *Scud-B* missiles, and Cairo is developing *Scud-C* missile production capabilities.²⁵ In August 2002, Slovak authorities revealed that two North Korean agents based in Slovakia were procuring millions of dollars of ballistic missile components for Egypt. Although the North Korean agents fled the country before Slovak authorities could arrest them, remaining documents showed that between 1999 and mid-2001, they ordered more than \$10 million worth of equipment and supplies for Egypt, to include items that

suggest that Cairo is trying to acquire a ballistic missile with a range of about 1,500km.²⁶ The Egyptian ballistic missile program, which has escaped much international scrutiny, has benefited from substantial North Korea assistance, which Cairo might eventually tap to support a nuclear weapons program such as warhead designs to carry on top of Egypt's ballistic missiles.

Egypt's interest in ballistic missiles with longer ranges than the *Scud* is long-standing. In the 1980s, Egypt cooperated with Iraq and Argentina on the Condor missile program. The United States in 1988 revealed that the Egyptians turned to Argentina for production help and Iraq for funding in a \$3.2 billion *Condor-2* project intended to provide Egypt and Iraq each with 200 solid-fuel ballistic missiles comparable to the American *Pershing II* nuclear delivery system.²⁷ Intense U.S. diplomatic pressure, as well as the 1990 Gulf war, forced the collapse of the program. Cairo might be rekindling its efforts to procure longer range missiles, calculating that U.S. attention is diverted elsewhere.

A series of scenarios could be envisioned in which Egypt could embark on a nuclear weapons program in earnest. If American grant assistance were cut significantly, the lifeblood for Egypt's conventional military modernization would evaporate and put more pressure on Cairo to compensate with comparatively cheaper investments in unconventional weapons. A continuing political deterioration over the Israel-Palestinian conflict, Arab street backlash over American military occupation of Iraq, popular Egyptian uprisings against the Mubarak regime, or Mubarak's death all could work to reduce Cairo's responsiveness to U.S. diplomatic pressure below what was the case when Egypt abandoned the *Condor* missile program. Cairo could look to nuclear weapons acquisition as a means for the political prestige needed to shore-up Egypt's domestic security situation and sagging political stature in the Arab world. Egypt might look to Pakistan as a model in this regard; a poor state, but one in which popular support for the nuclear program worked to Musharraf's political advantage at home and abroad. Arguably, Pakistan benefits from more international attention and American assistance than would have been the case had Pakistan not had nuclear weapons. Cairo also could calculate that only nuclear weapons could bring sufficient

political pressure on Israel to engage in serious arms control talks, much as they had between the Americans and Soviets during the Cold War.

AMERICAN POLICY AVENUES

The United States will have leverage and influence over Iraqi responses to Iranian nuclear weapons inventory as long as American and international forces play critical roles inside Iraq, but, over the longer run, that influence will subside and the incentives for Iraq to resume ballistic missile and nuclear weapons programs will grow stronger to balance growing Iranian ballistic missile and nuclear forces. The smaller Gulf Arab states, moreover, might be supportive of Iraqi efforts in this direction because they would see Iraq as a geopolitical counterbalance to Iranian and Saudi power much as they had during the 1980-88 Gulf war.

To stem this course of events, the United States will have to bolster Iraq's force projection capabilities by providing assistance in building a modern, capable air force to compensate for Iraqi restraint in resurrecting Iraqi ballistic missile programs. The Iraqis will have legitimate security demands for force projection capabilities against Iran's growing ballistic missile forces. The Iraqis also will need American and international security reassurance in continued linkages to western militaries to ensure that Iraqi conventional forces, while smaller than Iranian forces, are more capable in conventional military operations to deter Iranian ambitions. The Iraqis, too, will need international security reassurance to dampen the powerful incentive to pursue nuclear weapons to counterbalance Iran's nuclear weapons inventory.

The United States should be forward-leaning in diplomatic efforts to stem Egyptian and Saudi incentives to pursue nuclear weapons options. The United States is bound to have more leverage over Egypt, which benefits from substantial American military and economic assistance. As Jon Alterman observes, "the \$1.3 billion in military aid that the United States provides annually is useful as the present regime distributes patronage in the armed forces. U.S. economic aid, just under \$800 million annually and slowly declining, also helps the regime consolidate its patronage networks."²⁸

Egypt demonstrated sensitivity to U.S. diplomatic and political pressure that ended its *Condor* ballistic missile program in the late 1980s. The Egyptians, however, probably calculate that the United States has a short attention span and is easily distracted by other global events, especially today in Iraq and Afghanistan. In light of Iran's nuclear weapons program, the United States needs to squeeze Egypt's ballistic missile program and potential nuclear weapons aspirations back on to the policy agenda. The United States needs to speak firmly and directly with the Egyptians and challenge the country on the activities of its ballistic missile forces, which could be the platform for nuclear weapons delivery in the future.

American leverage against Saudi Arabia will be less than is the case with Egypt. The Saudis by no means depend on American economic support or largesse for the modernization of the Saudi military. Still though, the Saudis continue to see the United States as a strategic backdrop that could potentially again bolster the Kingdom in a future contingency. The United States needs to leverage the security reassurance it gives to the Saudis to gain access and Saudi updates on the status of CSS-2s. The United States should argue that the Saudi military benefits from access to American military facilities, and that the Saudis should reciprocate by allowing U.S. officials to inspect on a bilateral basis Saudi military facilities, missiles, and warheads, and to speak with Saudi personnel. Such efforts would give the United States a better understanding of the Saudi infrastructure, as well as underscore the potential negative consequences of the Saudis undertaking a bid for nuclear weapons on ballistic missiles.

The possession of nuclear weapons in Egypt and Saudi Arabia would be particularly troubling given the potential for political instability in these countries over the longer run. Both countries have a burgeoning demographic bulge of young and unemployed men who will be vulnerable for recruitment by domestic—especially militant Islamic—political opposition. Egypt in the past has had its armed forces penetrated by Islamic militants, witness the assassination of President Sadat during a military parade, and might again suffer from Islamic militants in military ranks who might have knowledge and access to nuclear weapons inventories. The same case could be made of Saudi Arabia. While these scenarios would not appear likely in the near term, they might not appear so hypothetical in 15 or 20 years.

These scenarios underscore the imperative of American statecraft to try to head off the Egyptian or Saudi acquisition of nuclear weapons in the near term to avoid being saddled in the future with unstable regimes politically struggling against militant Islam opposition both inside and outside the gates of power, much as the United States faces today with respect to Pakistan.

Syria will require more use of coercive diplomacy that entails the threat of force than the cases of Egypt and Saudi Arabia, if the United States is to discourage Syria from undertaking the nuclear weapons route. The Syrians have demonstrated a stubborn resistance to conciliatory measures from outside as well as a propensity to put their near-term interests over longer-term strategic interests. The Syrians, for example, appear to have rendered logistics assistance for Iraqi regime exodus from Iraq after the 2003 war, as well as facilitated the travel of Jihadists from the region into Iraq to fight American occupation forces. The United States needs to reaffirm directly to Syria that it is an isolated regime squeezed between powers—Israel, Jordan, Turkey, and Iraq—which are more favorably disposed to American than Syrian strategic interests. Damascus needs to know directly and clearly that the initiation of a nuclear weapons program would not be tolerated and the American or Israeli military forces could wreak havoc on Syria's limited infrastructure and obsolete conventional forces, the destruction of which would leave the ruling regime wobbling.

Rather than procure their own nuclear weapons capabilities, the smaller Gulf Arab States might seek to use a set of overlapping security arrangements to acquire a rough, if minimal measure, of deterrence against the Iranian nuclear weapons threat. Iranian nuclear weapons could act as a further catalyst for Arab Gulf States to nurture their security relationships with the United States. Kuwait, Bahrain, Oman, and Qatar might increase the already substantial security links that have bloomed with the United States since the 1991 Gulf war. These states see security ties with the United States as critical to ensure their autonomies from the major regional states of Iraq, Iran, and Saudi Arabia. If they were to become wedged between nuclear powers in Iran—and subsequently in Iraq and Saudi Arabia—the small Arab Gulf states might try to get themselves more closely tied with American conventional deterrence as well as under

a potential American nuclear umbrella. The small Arab Gulf states, moreover, would need to hedge their bets and simultaneously work to nurture ties with Saudi Arabia and Iraq to counterbalance Iranian aspirations for dominance in the Gulf.

The small Arab Gulf states will be looking to secure a protective coverage of American nuclear deterrence. They will seek to leverage their hosting and support of American conventional forces in the region for American security guarantees that an American nuclear forces deterrent will be leveraged against Iranian nuclear capabilities. Gulf States might ask the United States for a contemporary rendition of the “Carter Doctrine,” in which the United States made a veiled threat to respond with nuclear weapons in the event that the Soviet Union made a military bid for warm water Gulf ports. President Carter announced in January 1980, in response to the Soviet Union’s invasion of Afghanistan and closer proximity to the Persian Gulf, that “Any attempt by any outside force to gain control of the Persian Gulf will be regarded as an assault on the vital interests of the United States of America; any such an assault will be repelled by any means necessary, including military force.”²⁹ Although the United States might opt to couch a policy that applies to the whole region—as the Carter Doctrine had—the Arab Gulf states are unlikely to be able to coordinate among themselves a coordinated pitch to the United States. The United States, though, would be well-advised to steer clear of a renewed Carter Doctrine that imprudently relies on nuclear weapons. The Carter Doctrine made strong strategic sense, but because the United States at the time lacked the conventional force projection capabilities to make good the threat against Soviet forces, the doctrine amounted to a veiled American threat to resort to nuclear weapons.

The United States would be better off offering ballistic missile defense coverage than a new grand doctrine with veiled threats of American nuclear retaliation for military disruptions to the Gulf balance of power. The Gulf States with the experience of the 1991 and 2003 Gulf Wars have grown accustomed to benefiting from the provision of American ballistic missile defense coverage. And Iran’s acquisition of nuclear weapons undoubtedly will increase the Gulf Cooperation Council (GCC) states’ sense of vulnerability because one nuclear tipped Iranian missile could decimate the government,

ruling families, and societies of the smaller GCC states that, in some respects, have more in common with ancient city-states than modern nation-states. The United States might look to the GCC states for financial assistance to offset the research, development, procurement, and deployment of ballistic missile defense systems in the region, whether land- or sea-based. While sea- and land-based American ballistic missile defense systems are unable to provide strategic defense protection of the United States with its large landmass, they are capable of providing strategic protection to small states such as Qatar and Bahrain.

The Arab Gulf states and the United States would have advantages in drawing the North Atlantic Treaty Organization (NATO) into the Gulf to shore-up deterrence against a nuclear-ready Iran. From the Gulf state perspective, encouraging greater European security involvement in the Gulf via NATO is a potential means to hold in check what they perceive as assertive “unilateral” American diplomacy and statecraft vis-à-vis Iran. From the American perspective, NATO involvement potentially would give U.S. endeavors aimed at countering Iran at least a cloak of multilateral legitimacy. NATO’s European members, moreover, have recently shown more interest in Alliance involvement in the greater Middle East—particularly in Afghanistan—in no small measure to help repair the damage done to the trans-Atlantic relationship due to bitter French and German opposition to the war in Iraq. Washington should parlay European interest in repairing security ties to the United States to move NATO’s traditional focus on continental Europe to the greater Middle East, with a concentrated focus on dealing with a nuclear-ready Iran.

NATO involvement should complement rather than replace the U.S. role as the premier security broker in the Persian Gulf. Despite a recent upswing in European interest in the Gulf, the worldviews of European capitals remain focused on security issues in and around Europe. The Europeans are all too willing to let political and military problems in the Middle East fester, to step aside and let the Americans carry the lion’s share of the region’s political-military burdens, and to eagerly criticize American policy for failing to deliver a “perpetual peace” to the troubled region. While NATO’s European members devote considerable attention to political pomp and circumstance, their military capabilities are seriously eroding, leaving them with

little to no means to project military power into the Gulf.³⁰ The Gulf States understand that NATO can help politically contain American power, but, if push comes to shove in a future military contingency in the Gulf, only the Americans have the military power needed to act.

The United States today—unlike its European allies—does not lack the conventional means to project power in the Gulf as demonstrated in the wars of 1991 and 2003 against Iraq. And the United States would be wise strategically to tap that reputation for power to reassure partners in the region—in order to dampen incentives for exploring the nuclear weapons option—with ballistic missile defenses and conventional military means. The United States, with its preponderance of conventional forces, could threaten to remove the regime in Iran should nuclear weapons be used against American forces and regional partners. The reliance on conventional deterrence will underscore internationally the lack of usability of nuclear weapons, a mindset that, in turn, would dampen regional interest and prestige linked to nuclear weapons acquisition. Conversely, the American threat of nuclear weapons response in kind would heighten the importance and prestige of nuclear weapons and contribute to incentive for nuclear weapons proliferation. In the event that nuclear deterrence fails, the United States would have to make good on its nuclear threat and retaliate with nuclear weapons to cause most likely the end of the regime in Tehran, but at the unacceptable moral cost of thousands to millions of innocent Iranian civilian lives. Massive and tightly targeted conventional force retaliation offers a profoundly more moral and strategically effective deterrent because the threat is more credible than nuclear weapons response in light of the American restraint in inflicting civilian casualties in numerous conflicts since the end of the Cold War.

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CHAPTER 3

THE NUCLEAR CAPABILITIES AND AMBITIONS OF IRAN'S NEIGHBORS

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INTRODUCTION

The Islamic Republic of Iran has been suspected of pursuing nuclear weapons since the mid-1980s. Over the past 2 years, these suspicions have intensified due to revelations about Tehran's past failures to inform the International Atomic Energy Agency (IAEA) of significant nuclear activities and facilities. The most serious failures have involved neglecting to declare extensive work on uranium enrichment and plutonium separation—the two routes to producing weapons-grade material for nuclear weapons.

Iran's failure to live up to the both the letter and spirit of its Safeguards Agreement with the IAEA has prompted a serious deterioration in assessments of when Tehran could acquire nuclear weapons. It has been suggested that the time frame for Iran "going nuclear" could now be as early as 2005-07.¹ Such assessments have not gone unnoticed in Iran's immediate neighborhood, and concern is growing about the potential response of some of its neighbors, in particular whether Tehran's behavior could prompt other regional actors to consider acquiring nuclear weapons. Four countries, Saudi Arabia, Egypt, Turkey, and Syria, stand out in this respect due to their relative proximity to Iran and because there are suspicions that they have all, at one time or another, been interested in acquiring nuclear weapons. Although beyond the scope of this chapter, it is recognized that if one or more of these countries acquired, or came close to acquiring, a nuclear weapons capability, then this would influence nuclear deliberations in other countries, both within and beyond the Middle East and North Africa. If Egypt went nuclear, for example, this probably would influence nuclear decisionmaking in Algeria. Moreover, although the chapter does not examine the current case of

Iraq in relation to Iran, it is recognized that, in the long-term, a post-Saddam government could feel sufficiently vulnerable to consider acquiring nuclear weapons to counteract a future nuclear-armed Tehran.

Drawing purely on open sources, this chapter seeks to cast some light on the nuclear capabilities and ambitions of Saudi Arabia, Egypt, Turkey, and Syria. In addition to generally available sources, the authors utilize original Arabic and Turkish language sources and information derived from various scientific and technical journals/proceedings. For each country, an assessment is made of current nuclear capabilities, including various elements of the fuel cycle that could potentially be used to support the development of nuclear weapons. Attention is also given to the drivers of potential nuclear and other weapons of mass destruction (WMD) programs in the countries concerned, and potential nuclear delivery systems.

An analysis of available open sources revealed relatively little about national intentions regarding the acquisition of nuclear weapons—both in general terms and, more specifically, in response to the current Iranian nuclear crisis. The lack of pertinent information in this respect appears to stem primarily from the political sensitivity of the issue and the relatively closed and nontransparent nature of the societies involved, with the exception of Turkey. In contrast, it did prove possible to develop a fairly detailed picture of the various elements of the fuel cycle currently in existence or being developed in the four countries, as well as their potential nuclear delivery options. Although it is assessed that each country currently lacks the technical capacity to build a nuclear weapon, it is essential to note that open sources rarely will provide the complete picture. This is particularly the case with regard to the most sensitive aspects of nuclear weapons development—uranium enrichment, plutonium separation, and weaponization—which are subject to the greatest secrecy. Moreover, revelations throughout 2004 about the role of Pakistani scientist A. Q. Khan in illicitly supplying nuclear technology to Libya and Iran, raise the concern that other countries also may have benefited from this clandestine proliferation network. For example, Libya's acquisition of technology and assistance via the network prior to December 2003 had enabled Pakistan to begin to initiate a step change in its nuclear

weapon program. Moreover, Khan is known to have made business trips to numerous other countries including Egypt, Saudi Arabia, and Syria, although it is not known what the Pakistani scientist actually did on these visits.²

SAUDI ARABIA

Saudi Arabia does not possess a nuclear weapons capability and, based on an assessment of available open sources, the Kingdom does not appear to possess the necessary technical infrastructure to develop one indigenously, bar significant infusions of external assistance. However, there are some suspicions that Saudi Arabia has considered the nuclear option and even sought to purchase nuclear weapons from abroad, notably from Pakistan. This despite the country's non-nuclear weapon status and commitments under the Nonproliferation Treaty (NPT) which Riyadh signed in 1988.³ However, the Kingdom has yet to conclude a comprehensive safeguards agreement with the IAEA.⁴

Beyond the nuclear realm, there is "no confirmed evidence" that Saudi Arabia has a chemical or biological weapons program.⁵ Indeed, the Kingdom long has denied any intention to acquire WMD of any type and, similar to Egypt, has called for an agreement to make the Middle East a WMD-free zone.⁶ In Autumn 2002 Prince Naef bin Ahmed Al-Saud, a colonel in the Saudi Armed Forces with responsibilities for strategic planning, noted that "Proliferation must be seen in terms of regional realities: the Israeli monopoly in nuclear weaponry, defiance by Pakistan and India of nonproliferation regimes, and reported efforts by both Iraq and Iran to develop nuclear capabilities."⁷ At least one Saudi newspaper has expressed concern about Iran's nuclear intentions by noting that, "the danger will include countries such as Saudi Arabia, Oman, Iraq, Afghanistan, Turkmenistan, and Azerbaijan."⁸

Speculation about the Kingdom's potential interest in acquiring nuclear weapons goes back to the 1980s. Saudi Arabia originally signed the NPT in 1988 to address concerns that it wanted to arm its newly acquired DF-3 (CSS-2) intermediate range ballistic missiles (IRBM) with nuclear warheads. The missiles had been acquired from China at some point between 1986 and 1988. The transfer

was significant because it provided the Kingdom with the longest-range ballistic missiles (2,700-2,800km) outside the Permanent Five members of the United Nations (UN) Security Council. Indeed, the DF-3 gave Saudi Arabia the capability to strike targets throughout and beyond the Middle East. Moreover, the missiles had been withdrawn from Chinese service as nuclear delivery systems, although they reportedly were modified prior to shipment as non-nuclear capable systems.⁹ Despite suspicions that Saudi Arabia planned to arm the missiles with unconventional warheads, Riyadh claimed it had no intention to do so.

In early September 2002, Israeli Prime Minister Ariel Sharon said that “there might be Saudi money involved” in Libya’s nuclear weapons program, but this had not been confirmed.¹⁰ There has been much greater speculation about a potential nuclear link with Pakistan. Since the 1980s, there have been suspicions that Saudi Arabia has paid, or wanted to pay, Pakistan to conduct research and development of nuclear weapons. These suspicions have been based in part on the history of defence cooperation between the two countries including, for example, the training of Saudi pilots and naval collaboration. In recent years, suspicions have been fed by several visits to Pakistan by Saudi officials. In 1999, a team of defence officials visited Pakistan’s enrichment and missile assembly facilities at Kahuta where they were briefed by A. Q. Khan, the father of the Pakistani nuclear weapons program.¹¹ In 2002, the son of Crown Prince Abdullah was reportedly an invited guest at the test firing of Pakistan’s 950-mile range *Ghauri* nuclear-capable missile.¹² More recently in October 2003, it was alleged that Abdullah visited Pakistan and concluded a secret agreement on “nuclear cooperation” to cover nuclear technology in return for cheap oil. However, Saudi Arabia has denied this allegation.¹³ Recent revelations about the role of Khan in proliferating nuclear technology to several states of concern has further fueled suspicion about the Saudi-Pakistan nuclear connection.¹⁴ Indeed, Khan has travelled to Saudi Arabia in the past, although it is not known what he actually did during his time in the Kingdom.¹⁵

Prince Naef argued in 2002 that, “Saudi Arabia does not accept the notion that a Pakistani bomb is an Islamic bomb. Instead, national interest is regarded as the most likely factor affecting how nuclear

capabilities will be used. Nevertheless, regional competition increases concern among Saudis over the spread of WMD and ballistic missiles. Moreover, despite the lack of evidence that Riyadh may be pursuing a nuclear option, some speculate on the possibility.”¹⁶ Indeed, it was reported in September 2003 that Saudi Arabia was conducting a strategic review including deliberations related to the potential acquisition of nuclear weapons. The review appears to be the result of a growing perception of strategic vulnerability prompted by several interrelated factors, including: the crisis over Iran’s nuclear program and intentions, the lack of international pressure to address Israel’s nuclear arsenal, general regional instability in the Middle East, and the deterioration of relations with the United States since September 11, 2001 (9/11), including concerns about the reliability of U.S. security guarantees and the American nuclear umbrella. Although it is not known whether a decision has yet been made, the strategic review reportedly is considering three potential options on the nuclear front: (1) acquiring nuclear weapons for deterrent purposes; (2) maintaining an alliance or entering into a new alliance with an existing nuclear weapon power; and (3) seeking an agreement for a Middle East free of nuclear weapons.¹⁷

Nuclear Capabilities.

The national nuclear authority in Saudi Arabia is the King Abdul Aziz City for Science and Technology (KACST) in Riyadh.¹⁸ KACST describes itself as “an independent scientific organization of the Saudi Arabia Government”¹⁹ which provides “scientific and technological advice” and conducts “applied research programs and joint research activities with other international scientific institutions.” KACST assists the private sector in applied research for promoting agricultural and industrial development and funds research projects in universities such as studies of alternative energy resources and sewage water treatment.²⁰

The Atomic Energy Research Institute (AERI) was established within KACST in 1988 with the aim of adapting the nuclear sciences and technologies and utilizing them “in support of the economic, industrial and agricultural plans of the Kingdom.” The objectives of

AERI include drafting a national atomic energy plan and supervising its implementation; conducting research in the field of nuclear technologies; identifying manpower requirements in the area of atomic energy research; and training and developing manpower in the area of atomic energy research.”²¹ To do this, the institute has several departments: a Radiation Protection Department; an Industrial Applications Department; a Nuclear Reactors and Safety Department; and a Materials Department.²² The institute has programs that focus on industrial applications of radiation and radioactive isotopes, nuclear power and reactors, nuclear materials, and radiation protection.

A review of available open sources generated the following observations related to Saudi Arabia’s nuclear capabilities.

Uranium Resources. The U.S. Geological Survey makes no reference to uranium resources in its 2001 report on Saudi Arabia’s mineral sector.²³ However, it is evident that the Kingdom has conducted research into uranium prospecting, mining, and milling. In 1986, the IAEA approved a technical cooperation agreement with KACST and the Nuclear Engineering Department of King Abdul Aziz University to provide “training for the application of neutron capture techniques in in-situ mineral exploration.” The agreement covered prospecting, mining and analyzing raw nuclear materials.²⁴

Saudi Arabia does not appear to be involved in the recovery of uranium from phosphate rock. However, relevant research has been conducted in this area in the past. In 1987, for example, an academic currently at King Abdul Aziz University wrote a Ph.D. thesis on “The Separation and Determination of Rare Earths in Phosphate Deposits from the North of the Kingdom of Saudi Arabia.”²⁵ Saudi Arabia’s phosphate mines are operated by the Ma’aden mining company,²⁶ which was founded in 1997 to become the focal point of the country’s minerals sector. Ma’aden operates mines at Al Hajar, Al Sukhaybarat, and Bulgah which produce gold and silver. A mine at Mahad Ad Dabab produces copper, gold, and silver; and a mine at Al Amar produces copper, zinc, and gold. The company is carrying out exploration programs in the Al-Jalamid and Umm Wu-al areas.²⁷

Nuclear Power. Saudi Arabia does not possess a nuclear power reactor. However, the Kingdom has certainly demonstrated an

interest in nuclear power since at least the late 1970s. The IAEA approved a technical cooperation project in 1978 on nuclear energy planning with the Atomic Energy Department, Ministry of Petroleum and Mineral Resources, in Saudi Arabia. The aim was to establish "training and research institutions with regard to the introduction of nuclear power in the country."²⁸ It is evident that the Kingdom's interest in nuclear power has focused, at least partially, on its potential application in the desalination of seawater.²⁹ Indeed, researchers from AERI and the Nuclear Engineering Department of King Abdul Aziz University recently conducted research into the role of nuclear desalination in Saudi Arabia.³⁰ In 2001, the IAEA approved a technical cooperation agreement with AERI on transferring and enhancing national capabilities and skills "in modern forecasting techniques for the development and regular updating of future energy demands and optimal expansion plans for the power sector."³¹

Reprocessing, Spent Fuel and Waste Storage. Although Saudi Arabia does not appear to possess a reprocessing capability, the AERI has four laboratories of potential relevance in this field. These include laboratories for physical separation, chemical separation, radio chemistry, and radioactive isotopes and chemical separation.³²

Saudi Arabia does not have a spent fuel and waste storage capability. However, AERI is responsible for controlling radioactive waste disposal "in all installations that use radioactive material" and is reported to be preparing national regulations for radioactive waste disposal.³³ In 1995, the IAEA approved a technical cooperation agreement with AERI to establish a "comprehensive radioactive waste management program covering regulations, storage, and treatment." The agreement covered safety issues and technologies related to radioactive waste management.³⁴

Research Reactor. Saudi Arabia does not have a research reactor. However, it should be noted that the IAEA has provided extensive assistance to develop nuclear research and applications in the Kingdom.³⁵ According to one source, Saudi Arabia opened a nuclear research centre in a desert military complex at Al-Suleiyel, near Al-Kharj in 1975.³⁶

Delivery Capabilities. Saudi Arabia's potential nuclear delivery capabilities include both ballistic missiles and aircraft. Saudi Arabia

possesses 40-60 DF-3 (CSS-2) IRBMs, which can carry payloads of up to 2,500kg. The DF-3 is a single stage missile with a circular error probable of 1km. The missiles are reportedly deployed at two sites located 500km (al-Sulaiyil) and 100km (al-Joffer) south of Riyadh.³⁷ The missiles had been withdrawn from Chinese service as nuclear delivery systems, although they reportedly were modified prior to shipment as non-nuclear capable systems.³⁸ Their current status is unknown. According to one recent report, Saudi Arabia and Pakistan “have arranged a deal by which Pakistan will provide Saudi Arabia with nuclear technology in return for cheap oil,” and the Kingdom will also acquire a new generation of Chinese-supplied long-range missiles with a range of 4,000-5,000km.³⁹ In terms of fighter and ground attack aircraft, Saudi Arabia is reported to possess 50 F-15s (with 75 on order), 91 F-15C/D *Eagles*, 24 *Tornado* ADVs (F Mk3), 92 *Tornado* IDs, approximately 64 F-5E/Fs and 10 RF-5Es.⁴⁰

EGYPT

Egypt acceded to the NPT in 1981 and its comprehensive Safeguards Agreement entered into force in 1982 (INFCIRC 302).⁴¹ However, the country has been critical of the nuclear non-proliferation regime primarily because of Israel’s possession of nuclear weapons. In a debate at the UN General Assembly in late September 2003, Egyptian Foreign Minister Ahmed Maher said, “It is unacceptable that Israel’s possession of such weapons should remain a reality that some prefer to ignore or prevent the international community . . . from facing it squarely and frankly.”⁴² According to the Wisconsin Project, Egypt strongly opposed efforts to extend the NPT indefinitely in 1995.⁴³ Despite this lack of faith in the nonproliferation regime, Egyptian President Hosni Mubarak frequently has proposed the creation of a WMD-free zone in the Middle East as a way to address the nuclear threat posed by Israel and the wider challenge of proliferation.⁴⁴

Throughout 2003-04, it appears that Egypt has, in its public statements, continued to be much more concerned about Israel’s nuclear arsenal than Iran’s recent nuclear activities. As the Egyptian Foreign Minister said after John Bolton visited Egypt in June 2003, “Talks with the American official dwelt on Israel’s nuclear

arms.”⁴⁵ Moreover, Egyptian-Iranian relations appeared to improve significantly in late 2003 when negotiations were initiated over the resumption of diplomatic relations between the two countries.⁴⁶

In 2004 and early 2005, several media reports claimed that Egypt has been working on a clandestine nuclear program. These have included a few reports about potential “Egyptian links” to Libya’s nuclear program in the past. One report even referred to “evidence uncovered by a British-U.S. team of nuclear inspectors” working in Libya which confirmed “an exchange of nuclear and missile technology between Libya and Egypt in late 2003.”⁴⁷ Officials reportedly stated that the evidence confirmed suspicions of a 3-year-long secret trade between Cairo and Tripoli in strategic weapons obtained from North Korea.⁴⁸ Egyptian links with Libya in the nuclear field are believed to go back to the early 1970s. According to Shyam Bhatia writing in 1988, a link developed between Libya and high calibre Egyptian nuclear scientists in the early 1970s. This link reportedly resulted in the transfer of manpower and ideas to Libya. Bhatia wrote that Egypt explored the possibility of using Libyan money to keep up the momentum of research and development at Egypt’s nuclear center at Inshas and other locations, and both Qadhafi and Nasser reportedly gave this project their personal backing. However, Libyan-Egyptian cooperation was short-lived because relations between the two countries deteriorated in the mid-1970s when it emerged that Libya had backed a plot against Egyptian President Sadat.⁴⁹ Relations between the two countries later had recovered sufficiently to enable joint research in nuclear-related fields including personnel exchanges.⁵⁰

In addition to the alleged link with Libya, it was reported in November 2004 that the IAEA was looking into why plutonium particles had been discovered near a nuclear facility in Egypt.⁵¹ This was followed in January 2005 by a report that, according to diplomats, the IAEA “has found evidence of secret nuclear experiments in Egypt that could be used in weapons programs.”⁵² A report by the IAEA Director General to the Agency’s Board of Governors dated February 16, 2005, and leaked into the public domain shortly thereafter, subsequently confirmed that Egypt, indeed, had possessed undeclared materials and conducted undeclared activities

at its Inshas Nuclear Centre near Cairo. The materials and activities related to uranium extraction and conversion, the irradiation of uranium targets, and reprocessing. The key findings of these IAEA investigations related to Egypt are included in the sections below.

Nuclear Capabilities.

The Egyptian Atomic Energy Authority (AEA) is at the center of the country's civilian nuclear program and the main AEA nuclear research center is located at Inshas near Cairo. Egypt has conducted a considerable amount of nuclear relevant research. A review of available open sources generated the following observations related to Egypt's nuclear capabilities.

Uranium Resources. The AEA Nuclear Materials Authority has undertaken various technical co-operation projects with the IAEA on uranium exploration since 1989.⁵³ However, Egypt appears to have placed an emphasis on extracting uranium from phosphates as opposed to mining uranium itself. For example, IAEA investigations in 2004 revealed that Egypt's Nuclear Materials Authority (NMA) had conducted a project to separate uranium at a Phosphoric Acid Purification Plant at Inshas, although "it was never able to work as designed for the separation of uranium." It was also discovered that the NMA currently has "a program for heap leaching of uranium ore in the Sinai and Eastern deserts." The Egyptian authorities have claimed that "none of the uranium ore concentrate produced as a result of its leaching activities has been of a purity and composition that required it to be reported" to the IAEA.⁵⁴ In 1990, the AEA began a technical cooperation program with the IAEA titled, "Potential for yellowcake production." The objective was to provide expert services to undertake a prefeasibility study to assess the potential of two sites for a pilot plant.⁵⁵

Conversion, Enrichment, and Fuel Fabrication. The IAEA noted in February 2005 that investigations in 2004-05 had revealed that, prior to Egypt's Safeguards Agreement taking force in 1982, it imported nuclear material and conducted uranium conversion activities, using some of this material at Laboratories in the Nuclear Chemistry Building at Inshas.⁵⁶ According to the Egyptian

authorities, the experiments were designed within the “framework of staff development for the front end of the fuel cycle.” Initial IAEA investigations have discovered that Egypt failed to include in its first report to the Agency in 1982 “approximately 67 kg of imported UF₄, 3 kg of uranium metal (some of which had been imported, and some of which had been produced from imported UF₄), approximately 9.5 kg of imported thorium compounds, and small amounts of domestically produced UO₂, UO₃ and UF₄.”⁵⁷

In January 2005 it had been reported that, according to diplomats, the IAEA “has found evidence of secret nuclear experiments in Egypt” involving the production of “various components of uranium.” The Egyptians reportedly have produced “several kilograms of uranium metal and of uranium tetrafluoride—a precursor to uranium hexafluoride gas.” According to the diplomats, the work appears “to have been sporadic, involved small amounts of material, and to have lacked a particular focus,” indicating that it was “laboratory scale” and “not directly geared toward creating a full-scale program to make nuclear weapons.”⁵⁸ The experiments reportedly were conducted mainly during the 1980s and 1990s, but there may also be evidence suggesting that some experiments “were as recent as a year ago.”

Egypt does not appear to have an established enrichment program but research has been performed on relevant processes. For example, scientists at Cairo University have researched the chemical exchange process as a method of uranium isotope enrichment.⁵⁹ Moreover, research has been conducted at the University of Alexandria on multicomponent isotope separation in asymmetric cascades, which could potentially be used in uranium enrichment using aerodynamic methods.⁶⁰

The AEA has a Fuel Manufacturing Plant to produce the nuclear fuel necessary for the operation of the Agency’s multipurpose reactor. According to the AEA: “The starting material is uranium hexafluoride (UF₆) gas, 19.75 percent enrichment. This is converted into U₃O₈ through treatment with ammonia and water in special chemical reactors. This is followed by filtration and thermal treatment to get the appropriate particle size of U₃O₈. The oxide powder is mixed with aluminium powder and cold-pressed under 4.5 tons/cm² into compacts, which are then clad with sheets of aluminium 6061

alloy, and sealed by welding all around.”⁶¹ The plant can produce two fuel elements per month, which is sufficient for the continuous operation of the reactor. According to the Wisconsin project, Egypt had plans to build a larger fuel fabrication plant in the mid 1990s with help from Germany.⁶² However, these plans do not yet appear to have come to fruition.

Nuclear Power. Egypt does not have any nuclear power reactors. The Egyptian government has shown interest in starting a civilian nuclear power program since the 1960s. The Federation of American Scientists states that in the mid-1970s, the United States pledged to provide Egypt with eight nuclear power plants, and the necessary cooperation agreements were signed. This project was cancelled in the late 1970s after the United States unilaterally revised the bilateral agreements and introduced new conditions that were unacceptable to the Egyptian government.⁶³

Interest in nuclear power reactors has continued, and Egypt has carried out several relevant research programs. In 2001, the AEA began a technical cooperation project with the IAEA entitled, “Human Resource Development for Nuclear Power Project Preparation and Project Management.” The project’s objective was to “transfer knowledge, information, and experience related to the development of human resources for planning and implementing a nuclear power project for electricity generation and/or desalination.”⁶⁴ It was reported in September 2002 that an Egyptian government minister had announced the country’s intent to build a nuclear power plant on the north coast of Egypt, although no details of the plan were available.⁶⁵ Indeed, initial negotiations reportedly were underway in 2001 with Russia, after Egypt requested information about Russia’s atomic energy industry. According to General Director of Russia’s *Atomenergostroi* Viktor Kozlov, contracts may be signed as early as 2006.⁶⁶ Although new plans have not yet been announced, the media reported that Egypt has held negotiations with both China and Russia over the construction of nuclear power plants.⁶⁷ However, it was reported later in 2004 that the likely site for a nuclear power plant, Dabba, was about to be turned into a tourist resort.⁶⁸

Reprocessing, Spent Fuel, and Waste Storage. It has emerged as a result of recent IAEA investigations that in the late 1970s, Egypt concluded a number of contracts with a foreign company to construct

a laboratory (the Hydrometallurgy Pilot Plant) for conducting “‘bench scale radiochemistry experiments’ involving the separation of plutonium and uranium from irradiated fuel elements of the 2 MW research reactor.” According to Egyptian authorities, the experiments were motivated by plans to construct eight nuclear power plants and to develop expertise in the nuclear fuel cycle.⁶⁹

In 1987, Egypt subsequently performed “acceptance tests using unirradiated uranyl nitrate in chemical reagents” at the Hydrometallurgy Pilot Plant. The uranyl nitrate had been blended with a solution acquired from the dissolution of domestically produced scrap UO₂ pellets (estimated total weight of 1.9 kg of uranium compounds). However, Egypt failed to report to the IAEA both the materials and their use in test.⁷⁰

The reason offered by Egypt for not including the Hydrometallurgy Pilot Plant in its initial declaration to the IAEA in 1982 is that it “had not considered it to be a facility since it was being constructed only to carry out bench scale radiochemistry experiments.” The IAEA believes the plant constituted a nuclear facility, given its intended purpose and design capabilities, and Egypt should have informed the Agency “as early as possible prior to the introduction of nuclear material into the facility.”⁷¹

Further undeclared activities took place between 1990 and 2003. Egypt informed the IAEA in December 2004 that, between 1990 and 2003, 16 experiments had been performed, “involving the irradiation of small amounts of natural uranium in its reactors to test the production of fission product isotopes for medical purposes.” Twelve experiments involving a total of 1.15g of natural uranium compounds took place at the 2MW research reactor between 1990 and 2003. Four experiments involving 0.24g of natural uranium compounds took place at the 22MW reactor between 1999 and 2000. Nine thorium samples also were irradiated in the 2MW reactor. Moreover, the irradiated targets “had been dissolved in three laboratories located in the Nuclear Chemistry Building” although Egypt claims that “no plutonium or U-233 was separated during these experiments.” According to the Egyptian authorities, similar experiments were performed before its Safeguards Agreement took force, and between 1982 and 1988, but that it has been unable thus far to locate relevant source documentation with respect to such experiments.”⁷²

Egypt also informed the IAEA in December 2004 that it had not included in its initial Safeguards report imported “unirradiated fuel rods containing uranium enriched to 10% U-235 and some of which had been used in experiments” at the Nuclear Chemistry Building prior to its Safeguards Agreement taking force. The experiments were reported to have involved “laboratory scale testing of fuel dissolution in anticipation of the development of a reprocessing laboratory.”⁷³

Egypt currently is constructing a new Radioisotope Production Facility at Inshas for the separation of radioisotopes from uranium enriched to 19.7 percent in U-235 to be irradiated at the 22MW reactor. However, the Egyptian authorities have informed the IAEA that no nuclear relevant equipment yet has been acquired for the facility. According to the IAEA, the decision to construct the facility should have been conveyed to Vienna “no later than 1997 when it undertook to provide early design information for new facilities.”⁷⁴

Research Reactors. Egypt commissioned its first research reactor, the 2MW Soviet-supplied ET-RR-1 in 1961.⁷⁵ A second, the 22MW open pool Multi-Purpose Reactor (MPR), was commissioned in 1997. The MPR, supplied by the Argentine company, INVAP, is designed to produce radioisotopes for industrial and medical applications, as well as research on neutron physics and training personnel.⁷⁶ Both reactors are located at Inshas and are under IAEA safeguards.

It is reasonable to assume that, based on standard operating levels, the MPR will produce about 22g of plutonium per day of operation. Assuming that the MPR runs for 300 days a year (if in heavy service), it would produce 6.6kg of plutonium per year. The Fatman nuclear bomb used by the United States in 1945 used 6.5kg of plutonium.⁷⁷

Delivery Capabilities.

Egypt’s potential nuclear delivery capabilities include both ballistic missiles and aircraft. Egypt has a range of ballistic missiles both in its inventory and under development. Egypt is reported to have nine *SCUD-B* launchers⁷⁸ and slightly over 100 *SCUD-B* missiles. The inventory also reportedly includes approximately 90 Project T missiles, with a range of 450km and a payload of 985kg.⁷⁹ Other

ballistic missiles apparently are being developed. There are reports that Egypt has developed an enhanced *SCUD-C* missile, with a range of 550km and a 500kg payload. Furthermore, Egypt reportedly signed an agreement with North Korea in 2001 to purchase the 1000km-range *Nodong* system.⁸⁰ These reports have not been confirmed. It is also reported that Egypt is developing the Vector missile with a range of 800-1,200km and a 450-1,000kg payload.⁸¹ In March 2004, it was reported that evidence was uncovered by a British-U.S. team of nuclear inspectors working in Libya that, "an exchange of nuclear and missile technology between Libya and Egypt" took place "in late 2003."⁸² Egypt possesses seven squadrons of fighter-ground attack aircraft (including *Mirage 5E2*) and 22 squadrons of fighter aircraft (including F-16A and D, *Mirage 2000C* and 5D/E, and *MiG-21*).⁸³ It would appear that the range of combat aircraft available to Egypt would provide Cairo with a theoretical capability to deliver nuclear weapons.

TURKEY

Turkey's ratification of numerous nonproliferation agreements commits the country to the application of nuclear technology for purely peaceful purposes. These commitments include the NPT, IAEA Safeguards (including the Additional Protocol) and the Comprehensive Test Ban Treaty (CTBT).⁸⁴ Although the country does not possess a nuclear power reactor, the Turkish Atomic Energy Authority (TAEK) conducts a considerable amount of research in the nuclear field and operates one research reactor.⁸⁵

In the recent past, Turkey has shown considerable interest in establishing a civil nuclear power sector to alleviate energy shortfalls. The country is a net energy importer because it is not rich in energy resources. For example, Turkey imported 62 percent of its energy requirements in 2001. Turkish government officials believe this figure will increase by about 8-10 percent annually up to 2010, which will necessitate an installed power production capacity of approximately 46GW.⁸⁶ In 2002 and 2003 there were calls from national newspapers,⁸⁷ and even the head of the TAEK,⁸⁸ for Turkey to initiate a nuclear power program in order to reduce energy

imports. The Turkish government demonstrated a renewed interest in nuclear power in 2004. In November 2004, Turkish Minister of Energy and Natural Resources Hilmi Guler said Turkey should be producing 4,500MW of nuclear power beginning in 2012⁸⁹ with three nuclear power plants.⁹⁰

There is no evidence in available open sources that suggests Turkey has a nuclear weapons program. Indeed, given the openness of Turkey's nuclear research program, small uranium reserves, and lack of enrichment and reprocessing capabilities, it is difficult to believe that Ankara could develop a weapons program in the near future. Although some allegations have been made about the potential proliferation threat posed by Turkey, it is important to note that most have been voiced by Greek officials and focused on alleged nuclear cooperation between Turkey and Pakistan. For example, following a military coup in Turkey in September 1980, military leaders of Turkey and Pakistan reportedly exchanged a series of official visits, which prompted Greek Prime Minister Papandreou to accuse Pakistan of expecting Turkey "to act as a trans-shipper of material for a nuclear bomb" and likely to "reciprocate by proudly sharing the nuclear bomb technology with Turkey."⁹¹ Moreover, following the Indian and Pakistani nuclear tests an article in the Turkish daily "Radical" reported that then Pakistan Prime Minister Nawaz Sharif offered Turkey cooperation on nuclear weapons by stating, "Let's work together on nuclear weapons."⁹²

Ankara certainly has reacted with concern to Iran's recent activities in the nuclear field. Defense Minister Vecdi Gonul noted in November 2003 that Iran's efforts to export its own revolution, its contradictory attitude towards terrorism, and its policies towards Armenia and Azerbaijan are not in line with Turkey's interests, and make it difficult for Ankara to develop bilateral relations with Tehran. Moreover, he noted that Iran might be working on the production of nuclear, biological, and chemical weapons, which would threaten the whole region.⁹³ As Larabee and lesser note, a nuclear-armed Iran "could dramatically change the security equation for Turkey and could have broader consequences for military balances elsewhere on Turkey's borders."⁹⁴ However, it was reported on November 19, 2004, that Turkish Foreign Minister Abdullah Gul had told

journalists in Ankara that Turkey wanted the Middle East to be a region free of nuclear weapons. With regard to American concerns over Iran's nuclear activities, Gul said he expected caution on both sides, adding that Iran had a "long-standing place in the region. It would probably be very cautious. So we expect the problem to be resolved eventually."⁹⁵ It would appear, then, that there may be a substantial difference of opinion between the Foreign and Defence ministries in Turkey in terms of threat perceptions related to Iran.

Although Turkish and Israeli military and civilian officials appear to have discussed "joint threats" as part of their strategic cooperation,⁹⁶ it is not known to what extent Iran and its nuclear ambitions have featured in their discussions.

Nuclear Capabilities.

It appears that almost all aspects of the nuclear fuel cycle have been examined in Turkey except uranium enrichment. The Çekmece Nuclear Research and Training Centre is in charge of these activities, which are conducted by a network of nuclear-related research centers and laboratories based at government facilities and universities.

Uranium Resources. It was reported in November 2004 that Hilmi Guler had said that Turkey has 230,000 tons of thorium reserves and 9,200 tons of uranium reserves. Moreover, Guler noted that, while current technology in Turkey was more suited to uranium, thorium would be considered in the future.⁹⁷ Indeed, preliminary work has been conducted to survey, analyze, and determine the feasibility of using the country's natural thorium resources to fuel a future nuclear power industry in Turkey. Moreover, TAEK initiated a feasibility study on uranium extraction from phosphoric acid in the early 1980s, with assistance from the IAEA. According to the IAEA database on technical cooperation, this work is still active and may not yet be complete.⁹⁸ TAEK is working with ETI Holding and the Directorate General of Mineral Research and Exploration (MTA) on rare soil elements and the development of thorium extraction/purification technology.⁹⁹

Conversion, Enrichment, and Fuel Fabrication. Turkey appears to have one facility capable of engaging in conversion activities, a fuel pilot plant at the Çekmece Nuclear Research and Training Centre.

The extent of the facility's work remains unclear.¹⁰⁰ Moreover, while Turkey does not appear to have any enrichment capabilities, some potentially relevant research has been conducted at Turkish universities.¹⁰¹

Turkey has experimented with nuclear fuel fabrication on a laboratory scale. Relevant experiments have been conducted at several universities in Turkey, with research undertaken to understand the properties of nuclear fuel and the process of fuel fabrication. Dr. Gungor Gunduz, Department of Chemical Engineering, Middle East Technical University (METU), has participated in numerous projects with the TAEK and supervised student projects in this field.¹⁰² Fuel fabrication experiments and uranium analysis studies have also been conducted in the Department of Chemistry, Cumhuriyet University.

Nuclear Power. Although Turkey does not have a nuclear power plant, the country has shown an interest in nuclear power ever since U.S. President Dwight Eisenhower's Atoms for Peace speech in December 1953. However, it was not until the mid-1990s that Turkey made its most definite attempt to initiate a civil nuclear power program. In 1996, following additional feasibility and exploration work conducted by the Korean Atomic Energy Institute (KAERI), Turkey invited bids to construct a nuclear power plant at Akkuyu. By the end of 1997, three competing vendors were negotiating with Turkey for the deal: AECL (Canada), Nuclear Power International (NPI)—which included Germany's Siemens and France's Framatome—and the U.S. Westinghouse Electric Co. However, Turkish Prime Minister Bulent Ecevit announced in July 2000 that the Akkuyu project had been cancelled, blaming it on the International Monetary Fund's demands on Turkey with regard to its domestic economic policies. The country's nuclear power program was shelved indefinitely, and TAEK recommended Turkey's concentration on the development of natural gas and hydroelectric options until at least 2015.¹⁰³

The Turkish government began to demonstrate a renewed interest in nuclear power in 2004. In May 2004, Guler reportedly said that technical studies continued on nuclear power plants, Turkey would "soon get in touch with the countries producing such power plants," and that things are at the specifications of contract stage. According

to Guler, the government wants to involve the private sector in all kinds of investment in the energy sector, but the government could invest itself where necessary.¹⁰⁴ During a visit to Brazil in October 2004, Turkish Finance Minister Kemal Unakitan was due to hold talks with officials in Sao Paulo and Rio de Janeiro on economic relations. The meetings were expected to focus in part on cooperation in many fields including nuclear energy.¹⁰⁵

Guler said in November 2004 that Turkey should be producing 4,500MW of nuclear power from 2012.¹⁰⁶ The Turkish Ministry of Energy and Natural Resources also issued a statement in November 2004 noting that nuclear power was one of the most important alternative energy sources for Turkey. According to the ministry, Turkey is one of the few developing countries that possesses the infrastructure to transfer and to develop nuclear technology.¹⁰⁷ According to a report dated November 19, 2004, Guler said Turkey was planning to construct three nuclear power plants, and they would be on-line after 2011. Guler said that domestic resources were insufficient to meet the country's energy requirements, and an energy shortage could occur if no measures are taken. According to Guler, Turkey plans three nuclear plants to prevent such a shortage. The goal is to generate 8-10 percent of the country's energy needs using nuclear power plants. Guler said that the plan is to fuel the plants with uranium, and that current technology in Turkey was more suited to uranium, although thorium would be considered as a fuel in the future.¹⁰⁸

Reprocessing, Spent Fuel, and Waste Storage. Since the late 1980s, academics and government scientists in Turkey have worked both at home and abroad on studies to determine the most effective method for reprocessing spent fuels.¹⁰⁹ For example, a research project involving the Nuclear Engineering Department of Hacettepe University and the TAEK Nuclear Safety Department established feasible flow sheet calculations for using the solvent extraction process to reprocess thorium based spent fuel.¹¹⁰ The project was carried out in anticipation that Turkey may eventually build a thorium-based HTR reactor.

The majority of Turkey's radioactive waste classified as low-level is produced by the country's single research reactor, several research centers, and radiological sources in universities, hospitals,

and industries. The waste is collected, treated, and stored at the Radioactive Waste Processing and Storage Facility of the Çekmece Nuclear Research and Training Centre.¹¹¹

During negotiations to build a power reactor at Akkuyu, Turkey started to plan for an interim storage facility to accommodate spent fuel. Negotiations were initiated with Bulgaria and Hungary in 1997 to establish a regional interim storage facility or repository in south Eastern Europe—potentially in a remote location in Turkey. The site would have served as an interim storage facility or potential repository for spent fuel from the planned Akkuyu power reactor and reactors in Bulgaria and Hungary.¹¹² Given the cancellation of the Akkuyu project, negotiations with these countries are not likely to continue.

Research Reactors. Turkey has one operational research reactor. The ITU-TRR is a 250 kw TRIGA Mk II reactor, which was supplied by General Atomics and went critical in 1979.¹¹³ The reactor is located at the Istanbul Technical University, operated by the Institute for Nuclear Energy, and licensed by TAEK. Turkey's first research reactor, the 1MW TR-1 located at Çekmece Nuclear Research and Training Centre, was shut down in 1977.¹¹⁴ The country's second research reactor, the TR-2, a 5MWth upgrade of the TR-1, was shutdown in 1995.¹¹⁵

Delivery Capabilities.

Turkey's potential nuclear delivery capabilities include both ballistic missiles and aircraft. Turkey is reported to be developing a satellite launch vehicle (SLV) similar to the French *Ariane* SLV, which could potentially form the basis of a theoretical nuclear missile. The project is scheduled for completion by 2010 at the earliest, if the rocket and the satellite are completed simultaneously. The Rocketan Corporation has begun production activities related to the rocket under the supervision of the Turkish Aviation Institution. Other organizations involved include the Turkish Armed Forces, the Middle East Technical University, Istanbul Technical University, and the Turkish Scientific and Technical Research Institution. No decision yet has been reached on the location of the launch site, which is expected to be situated on the Turkish coast.¹¹⁶ Turkey is believed to have 120

MGM-140 Army Tactical Missile Systems (ATACMS), with a range of 160km and a payload capability of 450kg.¹¹⁷ The Turkish Air Force has a range of combat aircraft including 223 F-16 fighter aircraft (193 F-16C and 30 F-16D); 87 F/NF-5A/B fighter ground attack aircraft; and 170 F-4E aircraft (88 fighter ground attack, 47 fighters, and 35 recce).¹¹⁸ In addition, the air force now has some 100 Israeli *Popeye*-1 air-launched standoff missiles, with a range of 100km and a payload of 360kg. One hundred more may be delivered by Israel, and there are plans to co-produce, with the Israeli firm, Rafael, *Popeye*-2 air-launched standoff missiles, with a 350km range and a payload of 360kg.¹¹⁹

SYRIA

Syrian President Bashar Assad effectively admitted in an interview published in January 2004 that his country has developed chemical and biological weapons as a last resort defence against Israel.¹²⁰ Indeed, it has long been known that Damascus possesses a substantial chemical warfare capability and a more limited biological weapons capability.¹²¹ From a review of available open sources, however, it does not appear that Syria is pursuing seriously the development of nuclear weapons. Moreover, it appears that Syria does not currently possess the infrastructure and personnel necessary to establish a nuclear weapons program, bar significant infusions of external assistance.¹²² This assessment reflects Syria's non-nuclear weapons status under the NPT,¹²³ which has been subject to IAEA verification since the country's Safeguards Agreement (INFCIRC 407) took force in 1992.¹²⁴ Syria has not concluded an Additional Protocol with the IAEA or signed the CTBT.¹²⁵

The U.S. National Intelligence Council noted in December 2001 that the American intelligence community "remains concerned about Syria's intentions regarding nuclear weapons."¹²⁶ The country's limited infrastructure includes a nuclear research center at Dayr Al Hajar¹²⁷ and a small Chinese-supplied research reactor under IAEA safeguards. In May 1999, Damascus signed a "broad nuclear cooperation agreement" with Russia covering the construction of a small light-water research reactor, which will be subject to IAEA safeguards.¹²⁸ Syria and Russia have also approved "a draft

cooperative program on cooperation in the civil nuclear power field." It has been assessed by U.S. intelligence that, "In principle, broader access to Russian expertise provides opportunities for Syria to expand its indigenous capabilities, should it decide to pursue nuclear weapons."¹²⁹ In 2004, there were reports alleging that Syria may have acquired centrifuge enrichment technology from the A. Q. Khan network.

In March 2004 an agreement reportedly was signed between Syria and Iran on defense and military cooperation.¹³⁰ Both Syria and Iran confront a similar strategic situation and appear to recognize that they have a vested interest in cooperating with each other to retain their political independence. Both countries are united against Israel in support of the Palestinians, Hezbollah, and Lebanon. Moreover, they were both rivals of the Iraqi Ba'athist regime of Saddam Hussein, and both currently fear American hegemony and intentions in the region due to their own WMD ambitions and support for terrorism.¹³¹

Nuclear Capabilities.

The Atomic Energy Commission (AEC) is at the center of Syria's civilian nuclear program. A review of available open sources generated the following observations related to Syria's nuclear capabilities.

Uranium Resources. Syria has conducted significant work to examine the feasibility of exploiting phosphatic rock to recover uranium. The country is rich in phosphatic rock deposits and produces around one-fifth of the phosphate rock mined in the entire Middle East.¹³² In 2001, Syria mined over 2.04 million tons of phosphate.¹³³

Syria operates a uranium recovery micro-pilot plant at Homs.¹³⁴ The plant was designed to be the precursor for a pilot plant and an industrial scale plant, with potential operations such as refining, conversion, enrichment, and fuel fabrication.¹³⁵ However, a study, conducted to determine whether the technology used for extracting uranium from phosphoric acid produced at Homs could be industrialized, found that it was not feasible financially.¹³⁶ Damascus signed a tripartite contract with the IAEA and an unnamed entity in 1996 to improve its technical capabilities to recover uranium from triple superphosphate.¹³⁷

Several Syrian experts reportedly have spent time at Ranstad Mineral in Sweden, a facility that extracted uranium for enrichment purposes between 1997 and 2002. Although the IAEA reportedly sponsored some of the visits, according to the facility's owner, Bengt Lillja, the Syrians made additional trips "on their own."¹³⁸

Conversion, Enrichment, and Fuel Fabrication. Syria does not appear to have conversion, enrichment, or fuel fabrication capabilities. However, there were various reports in 2004 related to Syria's potential acquisition of enrichment related technology from the A. Q. Khan network. According to one report in August 2004, American officials believe that Syria received "an unspecified number" of P1 centrifuge components "in what could be the most significant step" in the country's "nascent nuclear weapons program." According to the officials, Firas Tlas, son of Syrian Defence Minister Mustafa Tlas, became a customer of A. Q. Khan in 2001. The components and other nuclear equipment reportedly were ordered by the Saddam regime in Iraq via Syria, and deliveries may have continued after Saddam's fall in April 2003.¹³⁹ In May 2004, however, it was reported that the U.S. intelligence community was divided on the issue of whether Syria had received technology from the clandestine network.¹⁴⁰ Moreover, a January 2004 report in *The Washington Post* noted that, although network middlemen from South Africa, Germany, the Netherlands, Sri Lanka, and elsewhere allegedly offered their services to Syria, the deals never apparently transpired.¹⁴¹

Moving beyond the centrifuge allegations, Syria does operate a *Cyclon-30* cyclotron which was provided by Belgium's Ion Beam Applications (IBA).¹⁴² IBA also supplied a cyclotron of the same model to Iran, which analysts suspect may have been used to research uranium enrichment.¹⁴³ The AEC had asked for IAEA assistance in 1996 to build a cyclotron facility at its Nuclear Medicine Centre. The project was approved by the IAEA, and construction of the facility began in 1997. The stated aim is to produce radioisotopes for medical purposes.¹⁴⁴ It should be noted that personnel at the AEC are also conducting research on CO₂ lasers, which could potentially be applied to laser isotope separation and therefore enrichment.¹⁴⁵

Nuclear Power. Although Syria does not have a nuclear power reactor, it has long viewed nuclear energy as a viable source to meet Syria's future energy needs. Damascus performed a feasibility study

in the early 1980s with help from the IAEA to identify the requirements for a potential power program,¹⁴⁶ and since the late 1980s has actively sought to acquire a nuclear power capability. Syria initiated a plan in 1988 to build six nuclear power reactors by the late 1990s capable of producing 6,000MW at a cost of \$3.6 billion. Although Belgium, the Soviet Union, and Switzerland were approached for assistance, the plan came to nothing as a result of financial and technical issues.¹⁴⁷ In 1990, for example, Syria asked the Soviet Union if it could buy up to four VVER-1000 power reactors and the associated fuel.¹⁴⁸

Russia and Syria signed a Comprehensive Cooperation Agreement in 1997 under which Russia reportedly will build two nuclear reactors in Syria, although it is unclear whether they will be for research or power production.¹⁴⁹ Syria's continuing interest in nuclear power was demonstrated in 2001 when the IAEA agreed to provide assistance for another project to assess the potential role of nuclear power in the country.¹⁵⁰

One potential application of nuclear power in Syria is desalination. The AEC is involved with Damascus University in a program to develop desalination technologies in conjunction with the Scientific National Commission for Water Desalination, based at the Higher Institute of Applied Science and Technology, Damascus.¹⁵¹

It was subsequently reported in 2003 that Russia and Syria had entered negotiations for the construction of a \$2 billion nuclear facility in Syria. Russia's Ministry of Atomic Energy confirmed that discussions were underway to supply a nuclear power plant and a nuclear desalination plant, but no agreement had been reached.¹⁵² However, the Russian Foreign Ministry denied that such discussions had taken place.¹⁵³

Spent Fuel and Waste Storage. There do not appear to be any spent fuel storage facilities in Syria, although the AEC is currently planning to construct a waste processing facility. To this end, the AEC recently established a Radioactive Waste Management Division to collect, treat, and store naturally occurring radioactive waste from Syria's mining, oil, and natural gas sectors.¹⁵⁴

Research Reactor. Syria's single 30kw research reactor—the SRR-1 (Syrian Research Reactor, Syrian Miniature Neutron Source Reactor)—was provided by China along with 90 percent enriched uranium fuel. The reactor is located at the Der Al-Hadjar Nuclear

Research Centre near Damascus, and went critical in 1996. It is used for basic and applied research and training reactor operators.¹⁵⁵ Syria and Russia have reportedly signed an agreement for the provision of a 25MW light-water pool-type research reactor to be housed in a new research centre.¹⁵⁶

Delivery Capabilities.

Syria's potential nuclear delivery capabilities include missiles and aircraft. Syria has several hundred *SCUD-B*, *SCUD-C* and *SS-21* missiles, according to *The Military Balance*¹⁵⁷ and the U.S. Department of Defense (DoD).¹⁵⁸ DoD states that Syria continues to acquire *SCUD*-related equipment and materials from Iran and North Korea, including considerable assistance from Pyongyang in producing *SCUD-C* missiles. According to *Jane's Defence Weekly*, Syria may have some *SCUD-D* missiles with a range of 650km.¹⁵⁹ Syria allegedly has tested a *SCUD-B* with a warhead designed to disperse VX nerve agent."¹⁶⁰ Damascus is also said to be attempting to develop a capability to arm ballistic missiles with biological warheads, although this has not been verified.¹⁶¹ Since 1999, it is thought that Syria has worked on establishing a solid-propellant rocket motor development and production capability with external assistance from abroad, including Iran. In addition, DoD claims that foreign equipment and assistance for Syria's liquid-propellant missile program has come from North Korean entities, as well as Chinese and Russian firms. According to DoD, these developments are part of Syria's efforts to acquire a modern, solid-fueled, short-range missile.¹⁶² Syria possesses 10 squadrons of fighter-ground attack aircraft (including Su-24, Su-22 and MiG-23 BN) and 16 squadrons of fighter aircraft (including MiG-21, MiG-23, MiG-25 and MiG-29A, and Su-27), according to *The Military Balance 2003-2004*.¹⁶³ The combat aircraft available to Syria would provide Damascus with a theoretical capability to deliver nuclear weapons.

CONCLUSION

The Iranian nuclear crisis has resulted in concerns about the potential response of some of Iran's neighbours, in particular

whether Tehran's behavior could prompt other regional actors to consider acquiring nuclear weapons. Within this context, the chapter sought to shed some light on the nuclear capabilities and ambitions of four key countries in Iran's immediate neighbourhood: Saudi Arabia, Egypt, Turkey, and Syria. These countries were singled out due to their relative proximity to Iran and because there have been suspicions that they have all been interested, at one time or another, in acquiring nuclear weapons. For each country, an assessment was made of current capabilities, including the various elements of the fuel cycle that could potentially be used to support nuclear weapons development and potential nuclear delivery systems. Attention also was given to the drivers of potential nuclear and other WMD programs in the countries concerned.

An analysis of available open sources revealed relatively little about national intentions in Saudi Arabia, Egypt, Turkey, and Syria regarding the acquisition of nuclear weapons—both in general terms and more specifically with regard to the current Iranian nuclear crisis. The lack of pertinent information in this respect appears to stem primarily from the political sensitivity of the issue and the relatively closed and nontransparent nature of the societies involved, with the exception of Turkey. In contrast, it was possible to develop a fairly detailed picture of the various elements of the fuel cycle currently in existence or being developed in the four countries, as well as their potential nuclear delivery options. It is assessed that each country currently lacks the technical capacity to build a nuclear weapon, barring significant infusions of external assistance. However, the recent exposure of Egypt's undeclared materials and activities is a significant cause for concern—not just in its own right, but in terms of whether it is indicative of a broader trend in the region already demonstrated by the Iran and Libya cases. Indeed, given that A. Q. Khan has previously visited Egypt, Saudi Arabia, and Syria, it is quite possible that, in addition to Iran and Libya, these countries also may have secretly acquired sensitive nuclear technology and expertise from this clandestine proliferation network in the past.

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CHAPTER 4

TURKEY, IRAN, AND NUCLEAR RISKS

Ian O. Lesser

INTRODUCTION

Turkey is among the countries most exposed to proliferation developments in the Middle East. New disclosures regarding Iran's nuclear ambitions, and Tehran's apparent commitment to proceed with more extensive IAEA inspections and safeguards, comes at a time of general flux in Turkey's strategic environment and in the country's foreign and security policy outlook. For some 50 years, Turkey has lived with nuclear weapons on its borders and deployed on its territory. Although not a nuclear state, and unlikely to become one, nuclear forces and doctrines have been part of the security calculus of the modern Turkish republic for the majority of its existence. But only since the Gulf War of 1990-91, and with increasing attention over the past few years, have Turkish planners and policymakers begun to view the combination of weapons of mass destruction (WMD) and the means for their delivery at longer ranges as a proximate threat to the security of the country.

In the context of a foreign and security policy that is, at base, conservative and multilateral, the Middle East is one region where Ankara has been prepared to think and act more assertively. The prospect of one or more nuclear or near-nuclear states on Turkey's Middle Eastern borders is now a significant factor in Turkish strategic thought. But in the nuclear realm, Turkey retains a strong preference for multilateral approaches, imbedded in the North Atlantic Treaty Organization (NATO)—and to an increasing extent, European—policies. The NATO (really the United States) nuclear guarantee has been the cornerstone of an approach that still owes much to Cold War patterns. Only very recently have Turkish strategists begun to contemplate a capacity for deterrence and response that goes beyond Alliance arrangements.

Turks worry about the reliability of both NATO and U.S. commitments to Turkish defense in Middle Eastern contingencies, and Turkey will be strongly affected by changes in Alliance strategy, missions, and cohesion, all of which are in flux. If the European Union (EU) does open formal accession talks with Ankara, as most Turks hope, the European part of this equation is set to grow in importance. While the defense dimension of Turkey's relations with Europe has been less prominent (and sometimes strained), this too is set to grow in prominence as the EU focuses more heavily on extra-European challenges, including proliferation.

Could Turkey act more radically, outside multilateral arrangements, to meet risks posed by a nuclear-ready Iran? The short answer is yes, but it is not very likely. Could Turkey "go nuclear"? Again, the answer is yes, but it is most unlikely. The key in both cases would be a sharp deterioration in the quality of Turkish defense cooperation with the West, and a sense that Turkey was being left to go it alone in a dangerous geo-strategic setting. Overall, the existence of a nuclear-ready Iran poses some direct risks to Turkish security – and many indirect but highly consequential ones. Implications for U.S. and Western policy abound.

This chapter explores the contours of Turkey's perceptions and potential responses to a nuclear-ready Iran. Section One discusses the Turkish strategic context, both regional and functional. Section Two assesses relations with Iran in the context of proliferation challenges, including the effect on wider regional dynamics. Section Three treats the range of possible Turkish responses to a nuclear or near-nuclear Iran, and external influences on Turkish choices. Section Four offers conclusions and policy implications.

SECTION ONE: THE TURKISH STRATEGIC CONTEXT

Turkey is a security-conscious society in which territorial defense and internal security remain priorities for the political class, the military, and the public. Broadly, the Turkish strategic culture displays several key characteristics that shape Ankara's approach to the challenge of a nuclear Iran, and relations with allies on proliferation matters. These characteristics include a pronounced sensitivity to

questions of national sovereignty (far higher the modern norm in Europe), a low threshold of tolerance for national insecurity and threats to the “homeland,” a high threshold for intervention outside the country, and a willingness to act massively and decisively when this threshold is crossed (e.g., Cyprus in 1974 and more recent cross border actions in northern Iraq). Foreign policy debates in Ankara are also characterized by an historic tension between the Atatürkist tradition of nonintervention, even isolation, and demands for more active regional engagement. Turkey shares many of these characteristics with the United States.¹

A Conservative Approach.

Turkish perceptions regarding Iran and proliferation issues are affected by a deep tradition of conservatism in foreign and security policy.² As a former imperial power, Turkey takes its regional role seriously, and Turkish strategists like to take the long view. Often, this puts them somewhat out of step with their Western counterparts. As an example, despite the transformation of western relations with Russia since the end of the Cold War, Turks have retained a very wary approach to Russian power and geopolitical aims. They have remained highly sensitive to the nuclear aspects of Russian doctrine, and Russia’s role in places like the Balkans and Cyprus – at a time when it has become fashionable to down-grade or dismiss the Russian factor in Europe and even Eurasia. In historical terms, Turkey has seen Russia as its primary geo-strategic competitor. Turkey’s relations with Arab neighbors in the Middle East have been colored by the experience of empire, including its collapse, leaving a legacy of mutual diffidence and mistrust. Iran, by contrast, has been a relatively stable and predictable neighbor, with no history of conflict with Ottoman Turkey or the Turkish republic.

Turks – like many others – have been relatively slow to adapt their security thinking to new risks, although this dimension of Turkey’s conservatism in external policy is changing under pressure of new regional realities, and a new constellation of actors in the policymaking process. Turkey’s very significant conventional military strength, with the second largest military establishment

in NATO, an increasingly modern force structure, and a growing capacity for power projection beyond its borders, is an important element in the country's perception of regional risks.³ On the one hand, Turkey's overwhelming conventional superiority vis-à-vis its Middle Eastern neighbors, and its NATO membership, are obvious and very potent deterrents to aggression in relations with Iran, Iraq, and Syria. On the other hand, like their counterparts in Israel and the United States, Turkish strategists worry that their conventional superiority compels regional adversaries to adopt unconventional, asymmetric strategies. This can take the form of support for terrorism and insurgency, as with Syria's past support for the Kurdistan Workers Party (PKK), or the threat to use chemical, biological, or even nuclear weapons against Turkish population centers or bases.⁴

Like other NATO allies, much Turkish thinking about nuclear forces and doctrine derives from Cold War experience. For 50 years, Turkey was a key forward location for intelligence and early warning on Soviet strategic forces and a base for potential nuclear operations against the Soviet Union. Nuclear-armed *Jupiter* missiles based in Turkey were traded away during the Cuban missile crisis, but Turkey continued to host tactical nuclear forces deployed in a NATO context. Turkish strategists remain attuned to shifts in Russian nuclear forces and doctrine. Even as Turkish-Russian political and economic relations have expanded dramatically over the past decade, security relations have remained tenuous, and Turks have been among the most sensitive of NATO members on the question of the re-nuclearization of Russian military doctrine.

Changing Perceptions of WMD Exposure.

Given the extraordinary extent of Turkey's exposure to WMD and missile risks emanating from the Middle East—easily the most pronounced in NATO—some analysts express surprise that Turkey did not signal its concern about proliferation issues earlier and more forcefully.⁵ As general concern about WMD in the Middle East grew among Western and Israeli strategists, even prior to the Gulf War, Ankara remained relatively unconcerned, adopting a “surprisingly nonchalant attitude” toward the threat.⁶ Several explanations can

be offered for this stance. First, a perception of substantial strategic depth, with the main Turkish population and economic centers at some distance from Middle Eastern borders.⁷ Obviously, as the range of missiles deployed in the region has increased, this perception has waned. Second, in line with Cold War thinking and prior to the troubling experience of the Gulf War in 1990, Turkey assumed that the NATO security guarantee was relevant and more than sufficient to deter regional, unconventional threats. Third, the Turkish security elite, like the Turkish elite in general, has preferred to focus on European and transatlantic issues, holding Middle Eastern problems at arms length wherever possible.

Turkish military planners noted with concern the exchange of missile strikes during the so-called “war of the cities” during the Iran-Iraq war. But the Gulf War of 1990 was the real watershed in Turkish strategic perceptions regarding WMD and missile risks.⁸ The war also had a negative effect on Turkey’s assumptions about the predictability of the NATO security guarantee in “out-of-area” contingencies. Despite threats from Baghdad, Turkey was not targeted by Iraq in its Scud missile campaign. Nonetheless, the Ozal government’s active role in the Gulf War coalition and the extensive air operations conducted from Incirlik Air Base, could well have made Turkey a target for retaliatory attack. During the run-up to the war, Turks were dismayed by the slow and contentious allied response to Ankara’s request for NATO air defense reinforcements (an experience repeated in the months before the 2003 Iraq war). The *Scud* attacks on Israel and in the Gulf made a strong impression on the Turkish military, who took away the lesson that Turkey’s large but rather out-dated military establishment required substantial modernization, including the ability to address WMD and missile risks from Iraq, Iran, and, above all, Syria.

From the early 1990s, Turkey’s small cadre of strategic analysts outside the government, including academic observers and journalists, began to pay increased attention to WMD and missile risks. At the official level, the response remained largely rhetorical. Turkey was never a particularly enthusiastic supporter of the United Nations Special Commission’s (UNSCOM) work in Iraq, although Ankara clearly benefited from the military containment of Baghdad.

With proximate reasons for conflict, Syrian chemical and improved-*Scud* programs remained the leading concern. Iran's nuclear and missile ambitions were seen as a more distant risk—linked more closely to American interests and behavior than to Turkish-Iranian dynamics.

Growing attention to the WMD problem was reflected in changes to Turkey's air defense strategy, which for the first time (1993) included the concept of countering medium-range missiles and potential nuclear arsenals deployed in countries to the south and east, with "countering" a matter of forward planning for enhanced early warning and missile defense procurement. The Turkish mix of active and passive defense against WMD envisioned reliance on NATO assets for deterrence, hardening of military targets and command and control, and bolstering the ability to locate and attack mobile targets (a tough problem, even for far more capable allies). The informed public debate noted the importance of the issue, largely as reflected through American and Israeli analyses, but was generally dismissive of Turkey's own missile defense strategy.⁹

As noted above, the general perception of threat from Iran and Iraq has been low. Turks in general have not shared the American concern regarding nuclear and missile risks emanating from either country, largely because Turkish observers find it difficult to imagine circumstances under which Iran or Iraq would employ such weapons against Turkey—except in retaliation for American intervention launched from Turkish bases. Turkey does have pronounced stakes in the future of Iran and Iraq, but these turn on questions of instability, consequences for Kurdish separatism affecting Turkey, the role of the region's Islamists in Turkish politics, and access to energy. The question of direct, state-to-state conflict has not loomed large in Turkish perceptions, in stark contrast to a far more unstable relationship with Syria.

The Israeli Factor.

Arguably, a leading factor in elevating Turkish attention to WMD risks, and Iranian WMD risks in particular, has been the development of a broad-based strategic relationship with Israel. Israel is an active

participant in Turkey's defense modernization program, and there is an impressive degree of collaboration on training and intelligence sharing, including surveillance and possible responses to nuclear and missile threats. More broadly, there has been a substantial convergence in strategic perception and regional risk assessment, driven by increased dialogue and objective factors. This strategic relationship has been encouraged by Washington, but has its origins in Turkish and Israeli interests. In some cases, Turkey sees Israel as an alternative and perhaps more reliable supplier of defense goods and services than the United States or the EU. Iran's nuclear and missile capabilities are central to Israel's strategic outlook, and this has certainly reinforced the issue in Turkish thinking (the potential for Turkish-Israeli cooperation in strikes against Iran's nuclear facilities are discussed in Section Four). Neither the Islamist Erbakan government of the mid 1990s, nor the current government led by Prime Minister Erdogan, with its "recessed" Islamic roots, has interfered significantly with Turkish-Israeli relations – a portfolio in which the Turkish military continues to play a leading role.

The Iraq War – and A More Diverse Security Debate.

The recent experience of the War in Iraq has focused Turkish attention firmly on the problem of northern Iraq, where Turks across the political spectrum perceive substantial stakes. The key variable here is the potential emergence of an independent Kurdish state out of the chaos in Iraq, and the effect this might have on Turkey's own Kurdish separatists. A secondary factor is Turkish affinity for Iraq's Turcomen, although this, too, is seen through the lens of the ethnic power balance in northern Iraq. Turks have been, and remain, less interested in the issue of WMD in Iraq, and tend to share European skepticism regarding the accuracy of pre-war intelligence (despite the fact that Turkish sources contributed to this intelligence, and Turkish analysts were no less convinced of Iraq's WMD capabilities than their opposite numbers in Europe and the United States).

That said, the risk of chemical or missile attacks on Turkish territory certainly figured in the public debate about cooperation with the United States prior to the war. The net effect was to reinforce

the sense that Turkey had a stronger stake in regional stability than in regime change with an unpredictable neighbor. The failure of bilateral negotiations over access to Turkish facilities in the spring of 2003—a close run thing—had multiple sources.¹⁰ Turkish concerns about WMD exposure, and lackluster backing from NATO, played a small but measurable role in this calculus of cooperation.¹¹

Today, Turkey's perception of nuclear and missile risks is shaped by an increasingly diverse national debate on security questions. The outlook of the Turkish General Staff still counts heavily, of course. But independent analysts and a vigorous private media now play a key role—and public opinion counts. The new elites, from cosmopolitan business circles to more traditional elements associated with the current AKP government, tend to be less security conscious and more heavily focused on domestic reform. Their views on external issues, including proliferation, are influenced heavily by international debates and, to an ever-increasing extent, by attitudes in Europe. Absent a direct threat to Turkish security, Turks across the political spectrum are now as likely—perhaps more likely—to frame policy toward Iran and its WMD capabilities in European rather than American terms. Barring a sharp deterioration in relations with the EU, the desire to stay in the European mainstream will be a key factor in Turkey's approach to a nuclear-ready Iran in the years to come. The result may be pronounced tension between an Israeli and American-inspired hard line on proliferation matters, and a softer, "diplomacy first" approach flowing from Brussels. These disparate approaches could be brought into line if the EU begins to take proliferation risks more seriously.

SECTION TWO: VIEWS OF IRAN, ITS NUCLEAR AMBITIONS, AND REGIONAL DYNAMICS

In a region which Turks are inclined to treat as a source of risk rather than opportunity, relations with Iran have been essentially stable, with little of the propensity for assertiveness evident in relations with Syria.¹² Both states have traditionally seen each other as status quo powers, and pre-revolutionary Iran had much in common with the secular, modernizing, western-oriented society Atatürk had promoted in Turkey. Turks often refer to their "dangerous

neighborhood" in the Middle East, but are also quick to note that Turkey and Iran lack a recent history of armed conflict. As a broad generalization, Turks *take Iran seriously* as a society and as a regional power, something that cannot be said for Turkey's approach to Syria, Iraq, or the Arab Gulf states. Iran and Israel are treated as peers in the Middle East; Syria, Iraq, and the Arab states of the Gulf are not.¹³

Sources of Turkish Concern.

This relatively favorable view of Iran has been slow to change since the Iranian revolution. Only within the last few years have elements of the Turkish security establishment come to see Iran as a serious challenge, and even today there are strong countervailing interests in improved relations. The sources of Turkish concern are straightforward. First, Turkey's secular elites, including the military, increasingly have been concerned about the export of Islamic radicalism from Iran. This concern is driven by Iranian financial and other support for activists abroad, and the ebb and flow of Iran's support for international terrorism. An Iranian hand is sometimes seen in the construction of Turkish religious schools (where Saudi backing has certainly played a larger role) and the financing of Islamist movements. In reality, these are marginal factors on the Turkish political scene. But those inclined to worry about secularism in Turkey, including harder-line elements in the military and Kemalists of the old school, tend to see Iran as an internal security threat.

Second, Iran is a key player with regard to the Kurdish issue in its regional setting, and relations on Kurdish matters continue to be a leading barometer of Turkish-Iranian relations as a whole. The history here is largely one of cooperation against a common fear of Kurdish separatism, but the vagaries of PKK/Kurdistan Workers/Labour Party (KADEK) deployments have led to periodic frictions. When the expulsion of the PKK from Syria forced Kurdish insurgents to operate from bases in Iran, Ankara responded forcefully, and the Turkish air force reportedly struck PKK camps inside Iran in July 1999.

Third, as noted earlier, Turkey increasingly has been concerned about the influence of WMD and missile proliferation on the security

environment, its own regional freedom of action, and that of its alliance partners. Iraq and Syria have also been part of this equation, and the WMD capabilities of these countries generally have been seen as posing a more proximate risk to Turkey. In the case of Syria, the regime's support for the PKK, against a background of frictions over territory and resources, actually brought the two countries to the brink of a military clash in 1998. Recurring Western military intervention in Iraq, and the use of Incirlik Air Base for Operation NORTHERN WATCH, made the possibility of Iraqi retaliation on Turkish soil an ongoing concern. In terms of its WMD capabilities and missile reach, Iran may have posed a more serious threat on paper, but few Turks worried about a clash with Iran in which WMD might become a factor — there was little rationale for conflict on either side. Indeed, Turkish economic interests in Iran, including access to natural gas, have been a strong countervailing factor.

Sources of Iranian Concern — and Improved Ties.

On the Iranian side, there are also some concerns regarding Turkey, although none have risen to a level posing a risk of direct conflict. Under conditions of instability in Iran, Turkey could chose to foment separatism among ethnic Turks in Azerbaijan, although Ankara, with its own concerns about national integrity, has been wary of supporting separatist movements elsewhere, whether in Chechnya or Kosovo—despite some internal pressures to do so. Iran has also been troubled by the presence of Iranian opposition groups in Turkey, including elements of the *Mujahiddin-i Khalq*. Turkish secularism and membership in the Western strategic “club” surely trouble Iranian conservatives. More specifically, Turkey could facilitate American or Israeli intervention in Iran, including the provision of intelligence, bases, and over-flight rights for strikes against Iranian nuclear or missile facilities. But on the whole, Iranian decisions regarding strategy and force structure, including nuclear and missile programs, are almost certainly driven by other factors.

Over the past year, Turkish-Iranian relations have improved considerably (as have Turkish relations with Syria), with four high-level Turkish visits to Iran, and six from Iran to Turkey. The

bilateral dialogue has spanned economic and educational matters, as well as the critical question of policy toward Kurdish groups in northern Iraq. Iranian nuclear and missile programs do not seem to be part of this agenda, although Turkey has been supportive of EU-led efforts to forestall new UN-sponsored sanctions over WMD matters.¹⁴ Observers attribute this improvement in Turkish relations with Tehran (and Damascus) to several factors, from the desire for a concerted approach to northern Iraq, to the more open attitude of the Justice and Development Party (AKP) government to engagement with Iran. Not least, Ankara has followed the lead of Europe in its own more active engagement of both states over the past year.¹⁵

Effect of a Nuclear-Ready Iran on Turkish Interests and Regional Dynamics.

A nuclear-capable or near-nuclear Iran would pose both direct and indirect challenges to Turkish interests. In direct terms, a functioning Iranian nuclear arsenal, coupled with Iranian short and medium-range missiles, would pose a much more dramatic and politically salient threat to Turkish security, going well beyond the current rather amorphous sense of WMD threat. An open Iranian nuclear capability would place immediate pressure on Turkey's slow-moving missile defense plans, and would probably compel Ankara to press for a much more direct NATO (and EU) stance regarding Article V and other commitments in Middle Eastern contingencies. Exposure to a nuclear arsenal on Turkey's borders would not be a new phenomenon for Turkey—Turks have lived with the reality of Soviet and Russian nuclear power for decades—but it would immensely increase the sense of insecurity in an already security-conscious society. In the absence of a predictable Western security guarantee, Ankara might also consider acquiring deterrent capabilities of its own, although the prospect for this is complicated and politically risky for Turkey.

Given the paucity of proximate flashpoints in Turkish-Iranian relations, the consequences of a nuclear Iran are likely to be felt more heavily across a range of wider geopolitical interests (i.e., interests beyond the defense of Turkish territory per se). First, a nuclear Iran

would acquire new strategic weight in its relations with Ankara, among others. This could greatly complicate Turkish diplomacy over Kurds, energy, and other issues that have been at the center of the bilateral agenda. In a less easily measured way, it might also affect Turkey's relative regional standing, with implications for relations across the Middle East, the Caucasus, Central Asia, and even the Balkans.

Second, a nuclear Iran would severely complicate Turkey's security relationships with Washington, Israel, and Europe. A new nuclear threat to Turkish territory, however theoretical, might encourage a convergence of strategic perception among those most affected by this development. In practical terms, however, Ankara will confront a series of new security dilemmas. Turkey's sense of regional exposure, and the need to "live" with neighbors, however unpalatable, is already a strong influence on the calculus of defense cooperation, as seen on numerous occasions since 1990, and as shown quite clearly in 2003. The potential for nuclear retaliation on Turkish territory would revive questions of alliance vulnerability, coupling, decoupling, and "singularization" familiar from the late Cold War.

Given the near-term potential for Western and Israeli intervention in Iran, these would not be theoretical considerations for Ankara. Indeed, the very existence of a nuclear arsenal in Iran would immediately raise the likelihood of and stakes surrounding intervention—at least until Iran acquired a sufficiently credible nuclear capability to deter a conventional first strike. At which point a very different calculus would emerge, with Turkey playing a role analogous to Germany during the Cold War. Under these conditions, Turkish strategists would need to consider whether a nuclear confrontation between Iran and the West would likely to be fought over their heads—possible if Iran developed ballistic missiles of intercontinental range—or on Turkish territory. The prospect would surely reopen doctrinal debates about nuclear strategy within NATO, at a time when the Alliance is contemplating a formal role in security across the "greater Middle East."

Turkey would not be alone in confronting these new dilemmas. For some time, southern European members of NATO have faced the reality of increasing exposure to retaliation from regimes across the

Mediterranean. Southern Europe and the Mediterranean, the least nuclear of theaters during the Cold War, have emerged as leading centers of nuclear and other WMD risks in the current strategic environment. With Libya's decision to dismantle its WMD and missile inventory, the center of gravity for this "southern exposure" has shifted to the eastern Mediterranean, where Iranian, Syrian, and Egyptian arsenals continue to shape NATO and EU perceptions of WMD risk.

Third, the advent of a nuclear Iran, and the possibility of a regional arms race embracing Turkey, could affect military balances and perceptions beyond the Middle East. Russia might feel compelled to respond, technically or doctrinally, to a nuclear Iran, with negative implications for the security of Turkey (unless the Russian response came as part of a concerted approach with the United States and Europe). Similarly, new nuclear and missile capabilities in Iran could have a cascading effect on security balances in the Balkans and the Aegean, where Greece is highly sensitive to changes in Turkish force structure and strategy. This effect has already been seen in the context of Turkish defense modernization (e.g., new air refueling tankers, airborne warning and control systems [AWACS], and army tactical missile systems [ATACMS]) aimed at Middle Eastern contingencies; it might also influence the Greek and Turkish interest in moving ahead with mutual and balanced force reductions, now being discussed.

Finally, Turkey could become an even more prominent focus of Western concern as a transit route for the "leakage" of nuclear materials and technology. Turkey is already at the center of police and intelligence cooperation regarding the interdiction of nuclear contraband. A nuclear capable Iran would raise the specter of another marketplace for nuclear technology, along the lines of Pakistan. The existence of such a market on Turkey's borders would make Turkey an even more essential security partner for the United States and Europe, but might also reinforce existing European wariness regarding the security "baggage" Turkey brings to the table. Which raises a larger question of deep interest to Turkey: Will the EU want to acquire a formal border with Iraq, Syria, and a nuclear armed Iran? This is a question Turks would prefer not to have as part of the

equation in relations with Europe at a time of critical decisions on Turkey's EU candidacy.

Under conditions of increased risk from a nuclear Iran, Turkey would have a very strong stake in the development of more active NATO and EU approaches to nonproliferation, counterproliferation, and missile defense. Ankara has been a leading proponent of multilateral initiatives in this area, especially those oriented toward the Mediterranean and the Middle East. Over the past few years, and with increasing urgency since 2003, NATO and the EU have placed proliferation issues higher on their agendas. The new European Security Strategy (the "Solana" document) identifies proliferation as a leading concern, and the EU now has in place an "action plan" on WMD.¹⁶ The new, tougher EU approach to proliferators can be seen in recent policy toward Iran and especially Syria, in which trade and cooperation negotiations clearly have been linked to progress on the WMD front (another likely rationale for Libya's recent disarmament moves).¹⁷ As Turkey enters a critical phase in its relations with the EU, looking toward the formal opening of accession negotiations in 2005, it is likely to see a growing and very welcome tendency to take nuclear proliferation more seriously in Brussels.¹⁸

NATO has had a series of initiatives in this area since the first Iraq war, and has devoted significant resources to improving intelligence sharing and command and control in WMD-related contingencies. But for both organizations, the improvements are largely in the realm of strategic concepts and doctrine, rather than capabilities. Confronted with a specific new nuclear threat from Iran, Turkey, like the United States and Israel, will focus on practical, operational responses rather than enhanced debate about the problem. Turkish policymakers will have the opportunity to encourage Alliance attention to nuclear risks and possible responses at the NATO summit in Istanbul in June 2004.

SECTION THREE: POSSIBLE TURKISH RESPONSES AND POLICY INFLUENCES

Revelations regarding the status of Iran's nuclear program, and the apparent Iranian commitment to enhanced International Atomic Energy Agency (IAEA) inspections, have not yet produced a

measurable response from Ankara, although Turkish policymakers are clearly supportive of pressure on Tehran over nuclear matters, at least in a multilateral context. But how might Turkey respond to the advent of an openly nuclear Iran, or an Iran that declares itself bent on acquiring nuclear weapons regardless of international sanctions? The range of possible Turkish responses is wide, from “denial” – ignoring the threat – to the acquisition of a nuclear deterrent of its own.

The critical context for Turkish decisionmaking in this sphere will be the extent and character of Turkish security ties – with the United States, within NATO, and with European partners. Internal political developments may also have a bearing on Turkish choices. But the perceived relevance and predictability of the country’s alliance relations will be the overwhelmingly important influence on Turkey’s response.

Denial and Decoupling.

Turkey could respond to a nuclear-ready Iran simply by denying the significance of the risk. There is some precedent for this approach in terms of Turkey’s relatively unconcerned response to proliferation trends in Iraq and across the Middle East prior to the Gulf War of 1990. A credible nuclear capability in Iran would be more difficult for Turkey to ignore, even if the prospect of a military clash with Iran remains very low. A nuclear-ready Iran threatens American and Israeli strategic interests in ways that Ankara cannot ignore if it is to maintain an effective security relationship with these critical partners. Under conditions of ambiguity or dispute regarding Iranian capabilities, Turkey might well opt for an assessment and response in the European mainstream, which might well lean toward “denial.”

Turks who wish to minimize the nuclear threat from Iran will do so by arguing that Turkey’s exposure comes about largely as a result of American and Israeli policies, and the direct risks to Turkey come via the prospect of American or Israeli intervention in Iran. In this case, many Turks might seek to decouple the country’s security policies from allies who bring more exposure than reassurance. But, with the range of hard security challenges Turkey faces, in multiple regions, it is unlikely that the current Turkish security establishment,

even in light of public opinion, would be willing to jeopardize Turkey's overall deterrent posture to pursue a strategy of decoupling in relation to Iranian risks.

Reinforced Conventional Deterrence.

The prospect of a nuclear-ready Iran would underscore existing Turkish concerns about defense modernization and could accelerate plans for improving the country's early warning and missile defense capabilities. Turkey might also seek to bolster its capacity for locating and striking mobile targets, as well as its rudimentary missile capability, currently limited to ATACMs and an exploratory short-range missile program. Turkey might decide to develop and press forward with an indigenous medium-range ballistic missile program, bringing it into line with several of its Middle Eastern neighbors. These efforts could be strengthened if Turkey proceeds with reported plans to develop its own space launch vehicle for military reconnaissance and commercial purposes by 2010.¹⁹ Turkey's alliance partners, especially Greece, might regard this with concern. Russia, a reconstituted Iraq, and above all, Syria, would regard this with alarm.

Rapid expansion of Turkey's missile defenses would be a less controversial and probably more useful approach. Turkey has already gone some distance in this direction with plans to acquire *Patriot* (PAC-3) missiles, and to participate in the Israeli *Arrow* and perhaps the U.S.-led medium-range extended air defense (MEADS) program with other European allies. Turkey is also a likely site for sensors and boost-phase interceptors deployed as part of an American strategic missile defense architecture.²⁰

The scale of Turkey's conventional forces and their increasing capacity for regional power projection, coupled with new missile and missile defense capabilities, surely would cause even a nuclear-armed regional adversary to think twice about confronting Turkey. That said, Turkish analysts are probably correct in their judgment that the real source of nuclear risk to Turkey flows from the strategic decisions of others—the United States and Israel—regarding Iran. Under these conditions, Turkey's own capacity for conventional preemption or response may not weigh heavily.

The Nuclear Option.

Could Turkey go nuclear? This question has been raised from time to time over the past 2 decades by Turks and others. The short answer is probably “yes.” Given sufficient time, Turkey probably would have the technical wherewithal to develop a limited nuclear arsenal and the means for delivering nuclear weapons in regional contingencies. That said, the costs—material, and, above all, political—of pursuing the nuclear option are almost certainly prohibitive for Turkey. The calculus surrounding the nuclear option could become more favorable only under drastically changed conditions, both internal and external.

Turkey has been a party to the NPT since 1980, and an additional safeguards agreement with the IAEA is also in force. The country’s nuclear research facilities consist of the Cekmece Nuclear Research and Training Center and a 250kw TRR research reactor at Istanbul Technical University supplied by General Atomics in the late 1970s.²¹ Since the mid-1960s, Turkey has explored the idea of building one or more nuclear power plants—even soliciting tenders for a 1,200MW plant at Akkuyu Bay near Mersin. But for a variety of financial and environmental reasons, little progress has been made.²² Over the last 2 decades, Turkey’s growing energy demands have driven a variety of new arrangements for importing oil and natural gas from Iran, Central Asia, and Russia. These demands could well have justified a nuclear power program, but the financial instability of recent years slowed the growth in energy demand and put an expensive nuclear program out of reach. Apart from cost, the leading internal impediment to nuclear power development in Turkey is now environmental politics, as elsewhere in Europe (critics charge that the proposed plant at Akkuyu is prone to seismic risks).

Concern about Turkish nuclear intentions has surfaced on a number of occasions, notably in 1981, when Turkey was alleged to have facilitated transfers of nuclear-related technology to Pakistan, and again in 1992, when Senators Glenn and Symington led an effort to halt aid to Turkey in light of allegations about Turkish-Pakistani nuclear cooperation.²³ Recent revelations regarding Pakistani nuclear technology transfers to Iran, North Korea, and Libya raise the question

of whether Pakistani scientists might have tried to sell nuclear designs and equipment to Ankara. Greek analysts have produced several studies exploring Turkish interests and capabilities in the nuclear realm.²⁴ Most of these pre-date the current détente between Athens and Ankara, and most allege a Turkish interest in acquiring nuclear material and technology from the Turkic republics of the former Soviet Union. Ankara has been quick to deny these allegations. For the most part, however, Greece and other neighbors with a stake in Turkish nuclear developments have been at least as focused on the environmental risks associated with civil nuclear power projects in Turkey. Few regional analysts have taken seriously the prospects for Turkey becoming a nuclear weapons state.

Pursuit of an independent nuclear capability would be a costly long-term project for Turkey, given the lack of a substantial civil nuclear infrastructure on which to build.²⁵ Western partners would not transfer the required technology outside the context of a civil program (they have been reluctant to do so even in the context of power projects), and all such transfers are now under intense scrutiny. As an open, democratic society, it would be extraordinarily difficult for Turkey to pursue a clandestine weapons program. To do so openly, to “break out” from NPT and technology transfer agreements would mean estrangement from key Western allies—or worse. A nuclear-armed Turkey would raise many of the same concerns associated with a nuclear Germany or a nuclear Japan. It would probably mean the end of Turkey’s EU ambitions, and could render the country a pariah in NATO circles. In short, it is an inconceivable path under current conditions.

Under what conditions might Turkey consider running these very considerable risks to acquire a nuclear deterrent? Internal politics could influence the attractiveness of a nuclear option, but it would probably require a complete reversal of Turkey’s secular, Western-oriented path—in short, an anti-western revolution. This is extraordinary unlikely. Externally, some combination of highly disruptive developments could make a nuclear option attractive, if no more practical. A short list of such developments would include the collapse of NATO and its nuclear-backed security guarantee; a dead-end in Turkey’s EU candidacy; a formal collapse of the international

nonproliferation regime and the rise of multiple new nuclear weapons states; and the emergence of real, proximate flashpoints in Turkish-Iranian relations outside the nuclear realm – taken together, regional and international anarchy as seen from Ankara.

Bilateral and Multilateral Responses.

Without question, Turkey's preferred response to a nuclear Iran will be multilateral. If there is a transatlantic consensus to act, either to constrain or sanction Iranian nuclear plans, or to prevent the production and deployment of nuclear weapons in a nuclear-ready Iran, Ankara will most likely be supportive, diplomatically and militarily. In the absence of a transatlantic consensus, the Turkish calculus will be more complex and uncertain. With decisions regarding EU accession talks looming on the horizon (and with other obstacles such as Cyprus on the way to resolution), Ankara will be wary of getting out of step with mainstream European policies, even under pressure from the United States or Israel. The ideal approach from the Turkish perspective would be a multilateral, UN-backed action aimed at the nuclear disarmament of Iran, leaving in place or even expanding the economic engagement of Tehran – essentially the Libyan model.

If diplomatic pressure and new sanctions are ineffective in slowing Iran's nuclear ambitions and Iran reaches a more advanced "nuclear ready" posture or actually prepares for the deployment of nuclear weapons, Turkey might back an American or Israeli strike against Iranian nuclear and missile facilities. Incirlik airbase could be put at the disposal of U.S. air expeditionary forces. Intelligence gathered from facilities in Turkey, as well as access to Turkish airspace for transit and refueling, would facilitate greatly Israel's ability to strike Iran's WMD infrastructure.²⁶ Turkey's increasingly capable air force could also contribute to counternuclear operations or strikes against Iranian missile sites of special concern (e.g., *Shahab-3* launchers).

Participation in an Israeli or American strike would imply some risks for Turkey, including the possibility of a preemptive or retaliatory Iranian missile strike, possibly WMD-armed, on Turkish bases or cities. Even Turkish support for stronger nuclear-related sanctions on Iran could jeopardize cooperation with Tehran on issues of concern

to Ankara. It could further complicate Turkey's Kurdish policies, and might spur Iranian meddling in Turkey's religious politics, or support for terrorism inside Turkey. On balance, however, Ankara will most likely run some risks to assure that it will not confront a nuclear Iran, with all that this would imply for longer-term Iranian leverage over Ankara across the board. The political dilemmas may be more difficult for Turkey, especially in the absence of European backing for military action against Iran. With European relations in the balance, Ankara might well opt to observe the destruction of Iranian nuclear facilities from the sidelines (perhaps with some very quiet intelligence and logistical support) rather than risk the political – and possibly real – fallout from active participation.

SECTION FOUR: CONCLUSIONS AND POLICY IMPLICATIONS

After years of relative neglect of WMD risks emanating from the Middle East, Turkey has begun to focus more seriously on these risks, above all the prospect of new nuclear powers appearing on the country's borders. A nuclear or near-nuclear Iran would negatively affect Turkish interests. Quite apart from the country's physical vulnerability to nuclear attack with missiles of increasing range and accuracy, a nuclear-ready Iran would complicate Turkey's regional policies, many closely tied to internal security concerns. Ankara already takes Iran seriously as a regional actor. A nuclear Iran would acquire far greater strategic weight in its relations with Turkey, and others. It is a development Turkey's security elite and increasingly active and well-informed public would prefer not to confront. This analysis points to a number of conclusions about Turkey's exposure and potential responses, with some important policy implications for the United States, Europe, and NATO.

First, Turkey's relations with Iran lack obvious flashpoints for direct military confrontation. There are certainly sources of friction, and these could worsen. But there is little risk of an overt clash of the kind imaginable with Syria until quite recently. Few Turks perceive a direct military threat from Iran. A nuclear Iran would reduce Ankara's regional freedom of action, but might not threaten

Turkish security directly in the near-term. The real effect on Turkish interests – and it could be substantial – would be of a longer-term, geopolitical nature.

Second, to the extent that Turkey does perceive a threat from Iranian WMD and missile capabilities, it tends to be seen as a product of American and Israeli confrontation with Iran, and possible spillovers affecting Turkey. Turkish bases and population centers would be exposed to the retaliatory consequences of intervention by Turkey's western partners. Turks have had to confront this reality as part of their calculus of cooperation with Washington in Iraq; it operates with equal force in relation to Iran. Turkish exposure, and an inherent ambivalence regarding sovereignty compromises in defense ties, means that Turkish cooperation in preventive action against Iran cannot be taken for granted despite Ankara's clear interest in forestalling the emergence of new nuclear powers in the Middle East.

Third, Turkey will be heavily affected by the strategies of others – the United States, Europe, Israel, Russia – vis-à-vis a nuclear-ready Iran. The country is not well-placed to undertake unilateral responses, and will exhibit a strong preference for multilateral approaches that do not expose Turkey to risks in its overwhelmingly important transatlantic and European relationships. Conventional and unconventional responses to Iranian nuclear proliferation could also have a cascading effect on strategic balances beyond the Middle East, affecting Turkish relations with Russia, Greece and others.

Fourth, the critical external influences on Turkish decisionmaking toward a nuclear-ready Iran are the perceived predictability of the NATO security guarantee, including a credible nuclear component, and Turkey's continued integration in Europe. To the extent that the NATO tie remains credible, Turkey's leadership is likely to adopt a measured response to Iranian risks. To the extent that the prospect of EU membership remains alive, Ankara will be wary of policy options that might jeopardize relations with Brussels and key European partners. Turkey could well find itself caught between more forward leaning American and Israeli counterproliferation policies on the one hand, and a more relaxed European approach on the other. This would be a tremendously challenging situation for Turkey, whose security

establishment, absent political considerations, might well prefer a more aggressive stance. The solution would be the development of a more assertive European approach to proliferation risks in Iran and elsewhere – and there is evidence to suggest that this is emerging.

Fifth, the United States and Europe have a clear stake in encouraging Turkey to take Iranian proliferation risks seriously, but without pursuing dangerous and destabilizing unilateral options in response. Turkey is inclined to pursue a measured path. In doing so, Ankara will rightly seek reassurance regarding NATO's commitment to Turkish defense in Middle Eastern contingencies. Turkish policymakers will look for evidence that NATO allies are addressing the doctrinal and operational challenges implied by the need to confront new nuclear and non-European risks. Turkey will seek, and should get, arrangements for the more rapid deployment of air and missile defense assets, and accelerated movement in the area of theater missile defense, including joint projects with Israeli participation. The June 2004 Istanbul Summit offers an excellent opportunity to place nuclear and missile risks higher on the NATO agenda and higher on bilateral agendas with Ankara.

ENDNOTES - CHAPTER 4

1. For a more extensive discussion, see F. Stephen Larrabee and Ian O. Lesser, *Turkish Foreign Policy in An Age of Uncertainty*, Santa Monica, CA: RAND, 2003.

2. On Turkey's strategic culture, see Philip Robins, *Suits and Uniforms: Turkish Foreign Policy Since the Cold War*, London: Hurst and Company, 2003, pp. 161-181.

3. In the mid-1990s, Turkey initiated a sweeping and very costly plan for defense modernization, possibly totaling 150 billion dollars or more in new acquisitions and up-grades over 25 years. The financial crisis of 2000 and onward has cast considerable doubt on the extent and pace of this program, but key aspects continue to move ahead as planned. Annual procurement spending is now in the region of \$3 billion per year, with an overall defense budget (narrowly defined) of roughly \$7.5 billion in 2001.

4. The ability of Turkey's adversaries to play an internal security card was central to the much-debated argument set out by Ambassador Sukru Elekdag in 1994, regarding the need for a "two and a half war" strategy, with Greece, Syria, and the PKK insurgency as key contingencies for planning.

5. Until quite recently, the author would have described Turkish policymakers as being "in denial" regarding the nature of proliferation risks on the country's borders and the implications for security cooperation with allies. See Ian O. Lesser

and Ashley J. Tellis, *Strategic Exposure: Proliferation Around the Mediterranean*, Santa Monica, CA: RAND, 1996.

6. Efraim Inbar, "The Turkish-Israeli Entente," unpublished paper.

7. Robins, p. 202.

8. See Anthony H. Cordesman, *Weapons of Mass Destruction in the Middle East*, London: Brassey's, 1991, pp. 40-42; and Duygu Sezer, *Turkey's New Security Environment, Nuclear Weapons and Proliferation*, Los Alamos, NM: Center for National Security Studies, 1994.

9. See, for example, *Turkish Daily News*, August 11, 1992, cited in Robins, p. 203.

10. See Lesser, "Playing Turkey," *Aspenalia*, Vol. 21, No. 22, 2003, pp. 166-174.

11. For a official Turkish assessment of NATO defense support to Turkey in the run-up to the Iraq War, see *Turkey's Security Perspectives and Its Relations with NATO*, Turkish Foreign Ministry, December 2003, p. 4, www.mfa.gov.tr/grupa/af/secure.htm.

12. I am grateful to Alan Makovsky for this description of Turkish attitudes toward the Middle East.

13. For an excellent discussion of Turkish strategy in the Middle East generally, see Kemal Kirisci, "Post Cold War Turkish Security and the Middle East," *Middle East Review of International Affairs* (hereafter MERIA), Vol. 1, No. 2, July 1997.

14. See Amberin Zaman, "Syrian Leader's Visit Highlights Shift in Relations with Turkey," *Los Angeles Times*, January 7, 2004.

15. Soner Cagaptay, "A Turkish Rapprochement with Middle East Rogue States?" *Policywatch*, No. 825, Washington, DC: Washington Institute for Near East Policy, January 9, 2004.

16. See *A Secure Europe in A Better World: European Security Strategy*, Paris: European Union Institute for Security Studies, December 2003; and the "Action Plan for the Implementation of the Basic Principles for an EU Strategy against Proliferation of Weapons of Mass Destruction," *The European Union and WMD Non-proliferation*, 2003, accessed at http://www.sipri.org/contents/expcon/eu_wmd.html.

17. This linkage is also noted in Javier Solana, "The EU Security Strategy: Implications for Europe's Role in a Changing World," remarks delivered in Berlin, November 12, 2003, accessed at http://europa-eu-un.org/articles/en/article_3006_en.htm.

18. See Dalia Dassa Kaye, "Europe, Syria and Weapons of Mass Destruction," *Policywatch*, No. 824, January 8, 2004, Washington, DC: Washington Institute for Near East Policy.

19. "Report on Turkey's Plans to Launch its Own Missile into Space by 2010 at Earliest," *Istanbul Milliyet*, February 1, 2004 (FBIS text).

20. See Guray Al, "Turkey's Response to Threats of Weapons of Mass Destruction," unpublished thesis, Monterey, CA: Naval Postgraduate School, December 2001, p. 119.

21. Ephraim Kam and Yiftah Shapir, eds., *The Middle East Strategic Balance 2002-2003*, Tel Aviv: Jaffee Center for Strategic Studies, 2003, p. 259.

22. See Robins, p. 205. For an extensive discussion of Turkey's civil nuclear program, see Mustafa Kibaroglu, "Turkey's Quest for Peaceful Nuclear Power," *The Nonproliferation Review*, Spring/Summer 1997.

23. Kibaroglu, pp. 38-39.

24. See, for example, Thanos Dokos, "Greece," in Harald Muller, ed., *Nuclear Export Controls in Europe*, Brussels: European Interuniversity Press, 1995; and Spyros Traiforos, "Nuclear Policy in Turkey: Is Turkey on Its way to Become a Nuclear Weapons State?" *Defensor Pacis*, January 1, 1999.

25. Robins, p. 205.

26. See Michael Eisenstadt, "Turkish-Israeli Military Cooperation: An Assessment," *Policywatch* No. 262, Washington, DC: Washington Institute for Near East Policy, July 24, 1997.

CHAPTER 5

THE DAY AFTER IRAN GETS THE BOMB

Kenneth R. Timmerman

Many analysts believe that a nuclear-ready Iran will act rationally and respond positively to Western-style cost-benefits analysis. Iran's clerical leaders are not suicidal, this argument goes, and do not seek a military confrontation with either the United States or Israel, because of the tremendous damage their country is likely to suffer.

Others argue that Iran has responded to classic deterrence in the past, and can be deterred successfully in the future. They point to the brief but brutal confrontation in November 1987 between the U.S. Navy and Iranian Revolutionary Guards forces who were using three offshore oil platforms as bases for harassment attacks against shipping in the Gulf. The United States destroyed the oil platforms and sank a number of Iranian ships, and Iran ceased its aggressive tactics. A nuclear Iran may talk aggressively, but in practice it can be contained and deterred.

But as I will argue in this chapter, this interpretation of Iranian behavior overlooks key facts, among them:

- Iran's motivation for seeking nuclear weapons;
- Iran's long record of support for international terrorism, including terror attacks against U.S. military targets in Beirut (Marine Barracks, 1983) and Dahran (Khobar Towers, 1996); and,
- The internal dynamics and core values of the regime.

DIPLOMATIC AND ECONOMIC MOVES

Conclusion 1: Iran will not Give Up Its Nuclear Capabilities through Negotiation.

After 16 months of intensified International Atomic energy Agency (IAEA) inspections during which Iran agreed to suspend

uranium enrichment and to stop building enrichment centrifuges, the Iranian leadership decided to reverse course and resume enrichment activities. On June 12, 2004, Foreign Minister Kamal Kharrazi announced that Iran “won’t accept any new [safeguard] obligations. Iran has a high technical capability and has to be recognized by the international community as a member of the nuclear club. This is an irreversible path.”

Kharrazi essentially pointed to the red line, indicating that Iran had no intention of abandoning its work to master the entire nuclear fuel cycle, from uranium mining, milling, conversion, and enrichment, to spent fuel reprocessing. “That somebody demands that we give up the nuclear fuel cycle . . . is an additional demand,” he said. “We can’t accept such an additional demand, which is contrary to our legal and legitimate rights,” he said. “No one in Iran can make a decision to deny the nation of something that is a source of pride.”¹ That “pride” clearly does not stem from mastering civilian nuclear technology, since Iran has been working in this area since its first U.S.-built research reactor went critical in November 1967.²

Similar statements about Iran’s nuclear intentions have been made by Hasan Rohani, head of the Iran’s Supreme National Security Council, and the regime’s chief nuclear negotiator; Supreme Leader Ayatollah Ali Khamenei; and recently-elected leaders of Iran’s Parliament, or *Majlis*. Even so-called “moderate” President Mohammad Khatami said his country had no obligation to respect the IAEA injunctions. “Nothing stands in the way” of renewed centrifuge activity, he declared on July 15, 2004, shortly after Iran broke the seals the IAEA had placed on key production equipment. “We are not committed any longer to the promise to expand the suspension to include building centrifuges because they [Britain, Germany, and France] failed to keep their promise of closing Iran’s dossier,” he said.³ On July 28, the IAEA reported that Iran had resumed production of uranium hexafluoride gas. That same day, an IAEA Governing Board member state circulated a two-page intelligence report alleging that “Iranian middlemen . . . are in the advanced stages of negotiations in Russia to buy deuterium gas” as a booster for thermonuclear warheads.⁴

Iran has insisted on mastering the fuel cycle even though its insistence has caused delays and increased the cost of building the

Bushier nuclear plant. To meet proliferation concerns, Russia initially offered to deliver reactor fuel worth \$30 million for Bushier over a 10-year period starting in 2001, taking the spent fuel rods back to Russia for reprocessing.⁵ But Iran subsequently rejected the Russian demand. In June 2003, the Russian government — eager to get paid and to conclude additional nuclear deals with Iran — offered to guarantee deliveries of nuclear fuel regardless of whether Iran acceded to the “Additional Protocol,” a key IAEA demand. Finally, in October 2003, Russian defense minister Sergey Ivanov declared, during a visit to Canada, that Russia would only supply the fuel if Iran made good on its pledge to sign a contract for returning spent nuclear fuel to Russia.⁶ By that point, Iran was unveiling to the IAEA its own nuclear fuel fabrication and reprocessing capabilities, making the whole question of Russian fuel deliveries and reprocessing moot.

Iran can be expected to continue this type of commercial nuclear hardball with its suppliers. As it gains expertise and capabilities, Iran could conceivably sever its commercial relationship with Russia and operate the reactor on its own under IAEA safeguards, until it decides to reprocess the spent fuel for a nuclear weapons arsenal.

Ignoring this recent history, a July 2004 Council on Foreign Relations (CFR) Task Force on Iran report suggested a grand nuclear bargain to the ruling clerics in Tehran. Under the CFR proposal,

Iran would be asked to commit to permanently ceasing all its enrichment and reprocessing activities, subject to international verification. In return, the international community would guarantee access to adequate nuclear fuel supplies, with assurances that all spent fuel would be returned to the country of origin, and to advanced power generation technology (whose export to Iran is currently restricted).⁷

But Tehran’s leaders have already rejected this approach; saying “pretty please” won’t help. The Islamic Republic wants to retain these capabilities because it wants to use the “legend” of nuclear power to mask its break-out capabilities. Iran’s negotiating record with the IAEA shows that the only nuclear bargain it finds of interest is one that runs out the clock, playing on the delusions of the willfully naïve and the appeasers until Iran has enriched enough uranium for a modest arsenal. France, Britain, and Germany have further

encouraged Iran toward intransigence by allowing it to break the IAEA seals on centrifuge production equipment with impunity.

Conclusion 2: Iran will Leverage Its Friends and Suppliers.

The Islamic Republic has few real friends. Syria and Libya were allies in its 8-year war against Iraq; and while Syria has remained true, Libya has not. There are indications that Iran's ruling clerics fear what Qaddafi will tell the United States and Britain about their shared uranium enrichment procurement efforts, following Libya's unilateral decision in December 2003 to surrender its nuclear weapons programs and equipment to the United States and Britain. Unconfirmed reports suggest that Iran has been arming the Libyan Combat Islamic Group at camps in southern Iran, after Qaddafi expelled the group from Libya in 1997. The group initially relocated to Afghanistan, where it worked with al Qaeda, but relocated to Iran after the United States expelled the Taliban regime in late 2001.⁸ A nuclear-ready Iran will feel more brazen to "punish" Qaddafi for cooperating with the United States and Britain by supporting this and other Libyan opposition groups. It also will reinforce ties with Syria, using Syria as a transit point for arming Hezbollah in Lebanon for stepped up attacks on Israel. It may be tempted to share weapons of mass destruction (WMD) technologies with Syria.

If friends are few, suppliers are many. The Islamic Republic's military and strategic relationship with North Korea goes back to the early 1980s and, because of the secrecy of both regimes, is not well-known to the general public. Iran's *Shahab-3* missile program was developed with North Korean, as well as Russian assistance. Former Revolutionary Guards commander Major General Mohsen Rezaei was a key player in the military exchanges with North Korea, and frequently traveled to Pyongyang to observe missile tests and purchase equipment. Considered by regime insiders as a nationalist, not an Islamist, Rezaei's continued involvement in Iran's strategic weapons programs is another indicator that all factions of the ruling elite consider the acquisition of broad-based WMD capabilities critical for the regime's survival. In late June 2004, new reports surfaced that Iran had been purchasing highly enriched uranium (HEU) from

North Korea over the previous 2 years. A nuclear-ready Iran could step up these purchases as a counter to international inspections or surveillance of its own enrichment plants.

Russia has been a major supplier of conventional weapons and nuclear and missile technologies. Indicators of Russia's willingness to help Iran's nuclear weapons program first surfaced nearly a decade ago when President Yeltsin's advisor for Ecological Affairs, Alexei Yablokov, revealed that part of the \$800 million nuclear deal signed between Russia and Iran in January 1995 included a Russian offer to supply a complete centrifuge enrichment plant.⁹ This was further confirmed when the complete text of the accord was published in May 1995 by the Natural Resources Defence Council in Washington, DC.

After intense U.S. criticism, President Yeltsin acknowledged at the Moscow summit on May 10, 1995, that the agreement with Iran contained military as well as civilian nuclear technology and material, but insisted that it had been "concluded legitimately and in accordance with international law and no international treaties were violated in the process." Yeltsin added that Russia was now amenable,

to separate those two. In as much as they relate to the military component and the potential for creating weapons grade fuel and other matters – the centrifuge, the construction of shafts – we have decided to exclude those aspects from the contract. So the military component falls away and what remains is just a civilian nuclear power station with light water reactors, which are designed to provide heat and power.¹⁰

Since that time, world attention has focused on Russia's ongoing negotiations with Iran over Bushier, not its involvement in the Iranian centrifuge enrichment program or the supply of know-how and expertise. In its public reports, the IAEA has pointedly excised all references to the "foreign sources" of Iran's centrifuge enrichment and reprocessing equipment.

Russia's role in helping Iran to design and build the nuclear-capable *Shahab-3* missile is much better known and well-documented than North Korea's. On July 20, 2003, production missiles were delivered to the Iranian Revolutionary Guards Corps, following

a final evaluation test that demonstrated that the *Shahab-3* was capable of launching a nuclear warhead to targets up to 800 miles distant, bringing Israel and U.S. bases throughout the Middle East into range. Top military and strategic advisors to Presidents Yeltsin and Putin have argued that Russia's long-term strategic interests are best-served by a powerful Iran capable of checking U.S. power in the Persian Gulf. Accordingly, Russia defied U.S. pressure throughout the mid and late 1990s by continuing to provide assistance to the Iranian missile programs, despite U.S. sanctions and threats of a cut-off in space cooperation.¹¹

Far from alienating Russia, a nuclear-ready Iran will exploit this long-standing relationship in ways that on the surface could appear contradictory. On the one hand, Iran might grudgingly agree to a Russian cut-off in assistance to the Bushier nuclear plant—thereby allowing Russia to appear “helpful” to Western nations seeking to apply pressure on Iran to abandon its clandestine nuclear capabilities. But at the same time, the Russian government could “wink and nod” at “nongovernment actors” who provide nuclear assistance and technology to Iran through grey market deals, just as they did with Iran's missile programs.

If the United States and its allies take Iran's case to the United Nations (UN), Iran will seek Russia's support in preventing UN Security Council sanctions or resolutions authorizing the use of force. To achieve Russian cooperation, Iran's leaders will offer Russia commercial inducements (oil and gas development contracts, industrial contracts, etc.) and strategic inducements, such as a pledge not to support Islamic groups in Chechnya and elsewhere opposing Russian rule. Iran played a similar game with noteworthy success during the 1980-88 Iran-Iraq war. The Union of Soviet Socialist Republics (USSR) rewarded Iran for its refusal to tolerate anti-Soviet resistance activities by Afghan refugees with extensive covert arms deliveries from the USSR and its surrogates. The Soviet-Iran arms relationship emerged into the open in June 1989, when the two countries signed a \$1.9 billion arms transfer agreement that included MiG 29 jet fighters and T-72 tanks.¹²

Communist China is another key partner. China's assistance to Iran's nuclear programs began with the supply of a subcritical

“training reactor” in 1985. China has helped Iran exploit uranium mines in Yazd province, giving Iran an unsafeguarded source of nuclear material for enrichment; it has supplied milling plants, and reportedly, a facility for producing uranium hexafluoride gas for enrichment centrifuges. Chinese assistance to Iran’s nuclear efforts was so extensive by 1991 that President George H. W. Bush issued a rare public rebuke to China’s leaders.¹³ Iran has now acknowledged having built many of these facilities, and has opened some of them to inspection by the IAEA, which has been careful in its public reports not to name names or even identify the countries involved in transferring critical technologies and design information.

A nuclear ready Iran will leverage trade for political support from China as well—both to restrain the IAEA, and when that fails and Iran’s case is referred to the UN, to veto UN Security Council action.

Conclusion 3: Iran will Attempt to Drive a Wedge between Europe and the United States.

Britain, France, and Germany have been trying since the fall of 2003 to convince Iran to abandon the most dangerous elements of its previously undeclared nuclear program. European Foreign Ministers have announced a series of “agreements” and “understandings” with Tehran aimed at freezing Iran’s uranium enrichment, reprocessing, and heavy water programs. In exchange, the Europeans have pledged to block U.S. efforts to get the IAEA to refer Iran’s noncompliance with the Non-Proliferation Treaty (NPT) to the UN Security Council for eventual sanctions. So far, Iran has found excuses for not respecting its commitments to the Europeans without any ill effects. Even after the IAEA announced that Iran had broken IAEA seals on its centrifuge production equipment in late July 2004, the Europeans refused to cancel a scheduled negotiating session with the Iranians in Paris.

The Islamic Republic has faced down Europe before. In 1997, after a German court convicted the Tehran leadership of having ordered the gangland murder of Iranian Kurdish dissidents at the Mykonos restaurant in Berlin, the European Union (EU) recalled its

ambassadors from Tehran and issued arrest warrants for top Iranian government officials. Iran denied the verdict, refused to hand over its officials, and the EU sent its ambassadors back to Tehran a few months later.

A nuclear-ready Iran will seek to turn Europe against the United States and Israel, offering lucrative trade agreements and superficial concessions at the IAEA to win EU backing. As further inducements, Iran could offer intelligence on terrorist groups operating in Europe (some of which it may itself be funding), or even concessionary oil supply arrangements. It could invite European journalists to tour its nuclear facilities, as a demonstration of Iran's peaceful intent. Should Europe adopt a harder line and back U.S.-led sanctions or military force, however, Iran could step up work on its *Shahab-4* missiles, said to have sufficient range to target European capitals.

STRATEGIC AND MILITARY MOVES

Conclusion 4: The Regime's Core Values will Drive It Ineluctably toward Aggressive Military Action, Not Responsibility.

Until recently, U.S. policy toward Iran has been driven by two underlying assumptions. The first assumption was that there were "moderates" within the ruling elite who sincerely wanted to cooperate with the United States, and who had serious differences with hard-liners in areas of critical U.S. interest¹⁴. The second was that the United States could offer them sufficient incentives (or inflict enough pain on the hard-liners) to convince the clerics to change those policies the United States found objectionable: in this case, to freeze and ultimately abandon nuclear weapons development. For nearly 2 decades, these assumptions have rarely been debated, let alone challenged, except by a select group of analysts.

But as I have argued elsewhere,¹⁵ the drive to obtain nuclear weapons and a broad spectrum of WMD capabilities is only one of five goals that unite the ruling clerical elite. These are the core values that form the bedrock of this regime, and will shape the actions of a nuclear-ready Iran. The remaining four are:

1. Maintaining the Islamic Republic at all costs, starting with the system of *Velayat-e faghih* (absolute clerical rule). Iran's ruling clerics

understand that their regime is increasingly unpopular at home. In July 1999, students at universities across the country revolted. While the regime has managed through heavy-handed repression to break the back of organized opposition, the signs that trouble is brewing just beneath the surface are many.

On the eve of the February 2004 parliamentary elections, 117 reformist members of Parliament resigned *en masse* to protest having been barred from running. The reformers had been seeking a “kinder, gentler” Islamic Republic, not an end to absolute clerical rule. The resulting election sweep by hard-liners effectively marked the end of the reform movement mirage. Iranian voters massively boycotted the elections but as of yet have not managed to otherwise challenge the regime, which has emerged emboldened from the election crisis.

At the same time, regime leaders fear foreign support for the pro-democracy movement, and increasingly view the proliferation of satellite radio and television broadcasts into Iran from abroad with alarm. As the United States contemplates providing support for the pro-democracy movement, we must understand that Iran’s new nuclear capabilities increase the stakes. A nuclear-ready Iran will not stop at violently suppressing domestic dissent, but will actively seek ways of lashing out at what it sees as the sources of that dissent: the United States and Israel. Similarly, any outbreak of dissent inside Iran, whether fueled by outside forces or not, will be blamed on the United States and Israel.

2. Aggressive expansion of Iran’s influence in the Persian Gulf region to become the predominant power, militarily, politically, and eventually economically. The Islamic Republic has a long history of using terror and subversion against neighboring states to achieve its goals. With a real or virtual nuclear arsenal at its disposal, Iran’s leaders may be emboldened to take more aggressive steps to assert its pre-eminence and to weaken competitors. A few examples include:

Saudi Arabia. Iran will resist Saudi efforts to step up oil production in order to lower world oil prices, and will want Saudi Arabia to feel the heat of Iran’s new power. A nuclear ready Iran could feel emboldened to step up its support for Saudi terrorist groups and direct them to sabotage or otherwise attack Saudi oil installations, should the Saudis refuse to decrease production.

Iraq. The Iranian government pursued an aggressive campaign of subversion against the Iraqi Governing Council following Operation IRAQI FREEDOM. It supported renegade Shiite cleric Muqtada Sadr, beamed anti-American propaganda into Iraq on 42 Arabic-language radio and television stations, and built a network of social services in southern Iraq that bested those provided by the Coalition Provisional Authority and the Iraqi Governing Council (IGC). A nuclear-ready Iran could step up subversion inside Iraq (attacks on oil installations, U.S. and Iraqi forces), with the goals of scaling back Iraqi oil exports, driving the United States to withdraw its troops, and preventing the emergence of a strong central Iraqi government that could challenge Iran.

Qatar. Iran is competing with Qatar to attract international investment to develop a massive shared gas field in the Persian Gulf. (The Iranians refer to the offshore gas field as South Pars; the Qataris call it the North Dome.) They are also competing to supply natural gas to India and Pakistan.¹⁶ Fear of a natural gas “glut” could lead Iran to seek to limit foreign investment in Qatari gas projects.

Turkey. Iran’s main economic competitor in the region is Turkey. Should Turkey’s secular parties or the military replace the current Islamic governing party, Iran could resume its support for Islamic terrorist groups to destabilize Turkey.

3. Calls to end the U.S. military presence in the Persian Gulf, which the Islamic Republic views as a direct challenge to its predominance. The Islamic Republic has long sought to force the withdrawal of U.S. military forces from the Gulf. Since the testimony of former Federal Bureau of Investigation (FBI) Director Louis Freeh on December 18, 2003, in a civil suit against the Islamic Republic of Iran brought by families of the Dhahran victims, Iran’s direct involvement in the bombing has become a matter of public record. The Iranian attack was aimed at causing casualties unacceptable to the U.S. public that would force a U.S. withdrawal from Saudi Arabia.¹⁷

In the past, the regime’s use of terror against U.S. targets has been selective, as Iran carefully gauged the U.S. response. A nuclear ready Iran will feel emboldened to launch terrorist attacks on U.S. forces wherever they are stationed in the region as the price of U.S. retaliation dramatically escalates. To step up pressure on the United

States to withdraw its forces, Iranian surrogates could also launch attacks against countries that host U.S. military bases (Qatar, Kuwait, the United Arab Emirates [UAE], Bahrain, Oman), and on U.S. naval ships patrolling the Gulf. (It is my judgment that Iran is less likely to seek to close the Strait of Hormuz, since this would cripple its own oil exports, or to openly challenge U.S. warships passing through the Strait, if it can achieve its goal of a U.S. military pullout through other means).

4. Active subversion of the Middle East peace process. Notwithstanding the vicious anti-Semitic rhetoric of its leaders, the Islamic Republic views Israel as a competitor. The ruling clerics fear that if the peace process succeeds, Israel will become the predominant economic power in the region and the partner of choice for the Arab world, Turkey, and Central Asia, instead of Iran. A nuclear-ready Iran will seek to broaden the struggle against Israel by expanding its support for terrorist groups based in the Palestinian territories, Syria and Lebanon. If war between Israel and its Arab neighbors were to break out, Iran has made clear it would throw its support behind Syria.

Conclusion 5: Iran Hopes Nuclear Capability will Deter a U.S. or Israeli Conventional Strike.

The chronology of Iranian nuclear development, which has accelerated rapidly since the September 11, 2001, attacks on America, strongly supports the view that Iran's leaders believe they can deter an American conventional attack with the threat of nuclear retaliation. "Iran's national defense doctrine has been based on the assumption that it will, one day, fight a war with the United States, plus its Arab allies and Israel," writes Iranian analyst Amir Taheri.

The central assumption of Iranian strategists is that the U.S. cannot sustain a long war. It is therefore necessary to pin down its forces and raise the kill-die ratio to levels unacceptable to the American public. In the meantime, Iran would put its nuclear weapons program in high gear, and brandish the threat of nuclear war as a means of forcing the U.S. to accept a ceasefire and withdraw its forces from whatever chunk of Iranian territory they may have seized.¹⁸

Iran's leaders have become increasingly bold in brandishing the threat of using nuclear weapons against Israel should the Israelis attempt a conventional strike against Iran's nuclear facilities. This is dramatically different from the Cold War logic of mutually-assured destruction, since it states that Iran would escalate a conventional conflict into a nuclear exchange.

But they have also hinted that they seek nuclear weapons (and the missiles needed to deliver them) to give them new offensive capabilities. Iran's Defense Minister Ali Shamkhani told reporters after a September 25, 1998, military parade that Iran would strike "in a way the Israelis cannot imagine" in the event Israel should launch a preemptive attack on Iran. "Today, we are much stronger than in the past. The most clear example is the *Shahab-3*. It will make the Israelis ponder about putting an end to the arms race one day," he said. Banners with the slogan, "Israel must be wiped off the map" in both Farsi and English, were hung from the *Shahab-3* missiles put on parade. Shamkhani explained: "We have written on the warhead of the *Shahab-3* that this will not land in any Islamic country. . . . Of course, this program will be pursued, and we will have the *Shahab-4* and even the *Shahab-5* to respond to our defense needs."¹⁹

At times, Iran's leaders speak with a kind of millennial exaltation when evoking a nuclear exchange with Israel. In a speech in Tehran in October 2000, former president Ali Akbar Hashemi-Rafsanjani clearly stated that Iran believed it would come out the winner. "In a nuclear duel in the region, Israel may kill 100 million Muslims," Rafsanjani said. "Muslims can sustain such casualties, knowing that, in exchange, there would be no Israel on the map."²⁰

Rafsanjani expanded on this doomsday calculus in a oft-cited Friday prayer sermon in Tehran on December 14, 2001, noting "the use of a [single] nuclear bomb in Israel will leave nothing on the ground," whereas an Israeli strike on Iran "will *only damage* the world of Islam" [emphasis mine]. Rafsanjani said that Israel would be "removed from the region and the world of Islam [as] 'extraneous matter'," and that "those who have gathered together in Israel would one day be dispersed again." This is not the language of mutually assured destruction or deterrence. This is the language of genocide.²¹

When asked about the possibility of Israel launching a preemptive strike against Iran's nuclear facilities, Rafsanjani boasted to al-Jazeera television on September 18, 2003, "We are not worried about Israel and its threats. If Israel committed such an error, we would give it a slap it would never forget – not only during several years, but for all its history."²²

Rafsanjani gets credited with having revived Iran's stalled nuclear program, first as Parliament Speaker in the early 1980s, and later as President from 1989-97. He now heads the Expediency Council, a leadership body capable of overturning the legislature or even the Islamic Republic's main religious court, the Council of Guardians. Once labeled a moderate by the *Washington Post* and the State Department, "either Rafsanjani fooled diplomats and pundits alike, or moderate in Iran implies first-strike use of nuclear weapons," scholar Michael Rubin commented.²³

Other government spokesmen have reinforced Rafsanjani's threats, as Israeli officials began warning publicly that a preemptive strike against Iranian nuclear sites could become necessary. Seyed Masood Jazayeri, spokesman for Iran's Revolutionary Guards, accused Washington of using its "wild dog" – Israel – to go after Iran's nuclear programs. If Israel tried to disrupt the Iranian program, it "would be wiped off the face of the Earth and U.S. interests would be easily damaged," he warned in July 2004.²⁴ President Khatami added that Iran would consider the United States co-responsible for an Israeli attack. "In the international arena, America's capital is Tel Aviv, not Washington. It's the Zionists who dominate the United States," he told reporters as he emerged from a Cabinet meeting. He also announced that Iran had resumed uranium enrichment activities.²⁵

The clarity of Iran's threats should not be dismissed as mere exaggeration or wishful thinking. A nuclear-ready Iran is likely to goad Israel into launching a preemptive attack, after it has dispersed its nuclear material to ensure that it survives the strike. If the regime feels threatened – from domestic dissent, or foreign attack – the risk of nuclear miscalculation is enormous.

U.S. OPTIONS

In my judgment, the United States has only two options if it allows Iran to achieve breakout nuclear capability: capitulation, or war. The United States might seek to encourage Iran to become a “responsible” member of the nuclear club, by opening a “dialogue” with the regime. In exchange for Iran’s agreement to abide by “rules” such as no nuclear first use, and no onward proliferation to third parties, the United States might chose to offer incentives such as:

- a resumption of normal trade and investment,
- a resumption of diplomatic relations,
- an end to stigmatizing the Islamic Republic as a member of the Axis of Evil, and
- ending “the language of regime change.”²⁶

The recent Council on Foreign Relations report opines that the underlying rationale for Iran’s persistent clandestine nuclear weapons programs is its fear of regional rivals, especially the United States. “Ultimately, only in the context of an overall rapprochement with Washington will there be any prospect of persuading Iran to make the strategic decision to relinquish its nuclear program,” the report states.

Such an analysis assumes that Iran developed nuclear weapons as a bargaining chip, which it would be willing to give up in exchange for certain concessions. But the United States repeatedly has offered to resume normal trade and investment, to hold a security dialogue with the regime, and to eschew the language of regime change, if only Iran would abandon other objectionable behavior – in particular, its support of international terrorist groups and its violent opposition to the Middle East peace process. If the Islamic Republic was unwilling to take up the offer when the costs were relatively low, why should it take the offer now when the costs are much higher? At best, the Islamic Republic might agree to a U.S. offer of trade and relations, in exchange for a pledge of no nuclear first use and no onward proliferation. But Iran’s leaders will take such a U.S. offer as a sign of weakness. Far from giving up its nuclear capability in exchange,

the Iranian regime will insist that it be treated with respect as a new member of the nuclear club. With the EU, Russia, and China in agreement to thwart strong UN Security Council action, the United States will have no levers available should Iran find a convenient excuse at some later date to break its promise and unsheath the nuclear sword.

The only other option for the United States is preemptive war. If so, it will be war in splendid isolation, and with active opposition from Europe, Russia, China, the Organization of the Islamic Conference, and just about every UN member state except, possibly, Israel.

Once the United States begins a buildup of offensive forces poised on Iran's borders, the Islamic regime is unlikely to wait before it uses whatever nuclear arsenal it possesses. Its first target will not be U.S. forces, but Israel. The Islamic regime will claim to be attacking in "self-defense" (and most of world public opinion will probably agree), since the U.S. administration will be portrayed as doing Israel's bidding, as the "moderate" president Khatami asserts.

Only one Iranian nuclear-tipped missile needs to penetrate Israel's *Arrow* anti-missile defenses to devastate Israel's highly-concentrated population. Even a cowed Israeli leadership, deterred from preemptively attacking Iranian nuclear sites, can be expected to unleash its nuclear arsenal, in a tragic reenactment of the Jewish defenders at Masada 2,000 years ago, who preferred suicide to surrendering to the Roman legion.

A NUCLEAR IRAN IS NOT AN OPTION

From the foregoing, it should be clear that allowing a nuclear Iran to emerge, for as long as Iran is ruled by a radical clerical regime, is not an option any U.S. policymaker wants to face. It should also be clear that the intentions of Iran's leaders are the issue, not the capabilities of its military. If nuclear weapons alone were the problem, the United States would have security issues with Great Britain.

It is my judgment that the United States must take decisive action before Iran becomes nuclear-ready, for as long as the Islamic regime remains in power in Tehran.

ENDNOTES - CHAPTER 5

1. Ali Akbar Dareini, "Tehran Says No to New Oversight," *Washington Times*, June 13, 2004, accessed at <http://www.washtimes.com/world/20040612-113944-3765r.htm>.

2. This 5 MegaWatt reactor, installed at the University of Tehran's Tehran Nuclear Research Center (TNRC), was supplied by AMF Atomics, a division of American Machine and Foundry, and was initially fueled with U.S.-supplied highly enriched uranium (HEU).

3. "No Impediments for Iran to Build Uranium Centrifuges," *Gulf News*, July 15, 2004. The IAEA acknowledged that its seals had been broken on July 27.

4. "Agents Seek Russian Sale of Nuke-Boosting Gas," *Washington Times*, July 29, 2004.

5. "Russia to Supply Iran with Nuclear Fuel," *Washington Times*, August 24, 1995; see also, "Russian Nuclear Deal Worries Germans," *Iran Brief*, September 5, 1995.

6. "Russia Not to Export Nuclear Fuel to Iran," <http://www.russiajournal.com/news/cnewsire.shtml?nw=40726#n40726>.

7. Zbigniew Brzezinski, Brent Scowcroft, *et.al*, *Iran: Time for a New Approach*, Council on Foreign Relations, July 2004, p. 39.

8. Con Coughlin, "Tehran Will Turn Terrorists on Gaddafi If The Former Ally Reveals Its Nuclear Weapon Secrets," *Sunday Telegraph* (London), February 29, 2004.

9. "Uranium Enrichment Program Confirmed," *Iran Brief*, May 1, 2005.

10. "Russian Nuclear Deals are On," *Iran Brief*, June 1, 1995. I provide a more detailed chronology of Iran's then clandestine nuclear weapons efforts and its suppliers in "Iran's Nuclear Program: Myth and Reality," a paper presented before the Sixth International Castiglione Conference, Castiglione, Italy, September 30, 1995. (Fifty Years of Nuclear Weapon: Proceedings of the Sixth Castiglione Conference, USPID, Milano (Italy), 1996.)

11. Kenneth R. Timmerman, "Russian Assistance to Iran's Missile Programs," testimony before the Subcommittee on Space and Aeronautics of the Committee on Science, U.S. House of Representatives, July 13, 1999.

12. "Post-Khomeini Iran: Looking for Friends," *Mednews*, Vol. 17, Issue 2, June 26, 1989.

13. "The China-Iran Nuclear Cloud," *Mednews*, July 22, 1991.

14. Many journalists and academics continue to use the terms "moderate" and "conservative" to describe the two main camps. I will discuss Khatami's "moderation" in this chapter. As for the "conservatism" of clerics such as Ayatollah Khamenei, who was educated at Patrice Lumumba University and has long

supported state control of the economy, he is about as “conservative” as Joseph Stalin. For a more detailed discussion, see “Change in Iran and Challenges for U.S. Policy-makers,” a paper delivered at a Congressional Research Service forum on Iran, January 8, 1999, available at http://www.iran.org/tib/krt/krt_index.htm.

15. See, in particular, “Fighting Proliferation through Democracy: A Competitive Strategies Approach Toward Iran”; From *Prevailing in a Well-Armed World: Devising Competitive Strategies Against Weapons Proliferation*, Henry Sokolski, ed., Carlisle, PA: U.S. Army War College Strategic Studies Institute, March 2000. Versions of this thesis were presented in seminar format at the U.S. Army War College, the U.S. Department of Energy, and elsewhere.

16. In July 2004, Iran revived stalled efforts to attract investment to build an Iran-India natural gas pipeline that would cross Pakistan, either by land or in Pakistan’s offshore economic zone.

17. Freeh and his deputy for Counterterrorism, Dale Watson, described FBI interviews with participants in the attack who provided evidence to the FBI that they had been trained, funded, and armed by the Iranian government. Testimony in *Heiser v. Islamic Republic of Iran*, U.S. District Court for the District of Columbia. See also Kenneth R. Timmerman, *Countdown to Crisis: The Coming Nuclear Showdown with Iran*, New York: Crown Forum, 2005, pp. 188-189.

18. 20. Amir Taheri, “Recipe for Disaster,” *National Review*, November 14, 2003; http://www.nationalreview.com/nr_comment/taheri200311140918.asp.

19. “Shamkhani’s Threats,” Iran Brief, October 5, 1998.

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